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★ The war has both multiplied the number of Official Departments and encouraged Societies and Committees of all kinds to become more vocal. The result is a growing output of official and group propaganda. A glossary of abbreviations is now provided below, together with the full address and telephone number of the organizations concerned. In all cases where the town is not mentioned the word LONDON is implicit in the address.

AA	Architectural Association. 34/6, Bedford Square, W.C.1.	Museum 0974
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8
APRR	Association for Planning and Regional Reconstruction. 32, Gordon Square, W.C.1.	Euston 2158-9
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Welbeck 9738
ASB	Architectural Science Board of the Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 5721
BC	Building Centre. 23, Maddox Street, W.1.	Mayfair 2128
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. Shobnall Road, Burton-on-Trent.	Burton-on-Trent 3350
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246
BSA	British Steelwork Association. 11, Tothill Street, S.W.1.	Whitehall 5073
BSI.	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CEMA	Council for the Encouragement of Music and the Arts. 9, Belgrave Square, S.W.1.	Sloane 0421
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CSI	Chartered Surveyors' Institution. 12, Great George Street, S.W.1.	Whitehall 5322
DIA	Design and Industries Association. Central Institute of Art and Design, National Gallery, W.C.2.	Whitehall 2415
DOT	Department of Overseas Trade. Dolphin Square, S.W.1.	Victoria 4477
EJMA	English Joinery Manufacturers Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
FAS	Faculty of Architects and Surveyors. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FMB	Federation of Master Builders. 23, Compton Terrace, Upper Street, N.1.	Canonbury 2041
FS (Eng.)	Faculty of Surveyors of England. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
GG	Georgian Group. 55, Great Ormond Street, W.C.1.	Holborn 2664
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
HPS	Housing Production Society. 1, Old Burlington Street, W.1.	Regent 3380
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 3158
ICE	Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, W.C.2.	Temple Bar 7676
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128-29
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3767
MARS	Modern Architectural Research. 46, Sheffield Terrace, W.8.	Park 7678
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Belgrave Square, S.W.1.	Sloane 4522
MOH	Ministry of Health. Whitehall, S.W.1.	Whitehall 4300
MOI	Ministry of Information. Malet Street, W.C.1.	Euston 4321
MOLNS	Ministry of Labour and National Service, St. James's Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Abbey 7711
MOTCP	Ministry of Town and Country Planning. 32-33, St. James's Square, S.W.1.	Whitehall 8411
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94, Petty France, S.W.1.	Abbey 1010
NBR	National Buildings Record. 66, Portland Place, W.1.	Welbeck 1881
	All Souls' College, Oxford.	Oxford 48809
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041
NFBTO	National Federation of Building Trades Operatives. 9, Rugby Chambers, Rugby Street, W.C.1.	Holborn 2770
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 2881/2/3
NT	National Trust for Places of Historic Interest or Natural Beauty. 7, Buckingham Palace Gardens, S.W.1.	Sloane 5808
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
PWB	Post War Building, Directorate of. Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 7611
RCA	Reinforced Concrete Association. 91, Petty France, S.W.1.	Whitehall 9936
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 5721
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Temple Bar 8274
SFMA	School Furniture Manufacturers' Association. 13, New Square, Lincoln's Inn, W.C.	Chancery 5313
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 75, Cannon Street, E.C.4.	City 6147
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815

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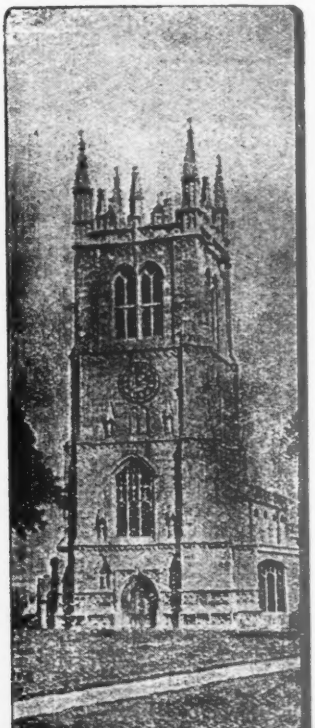

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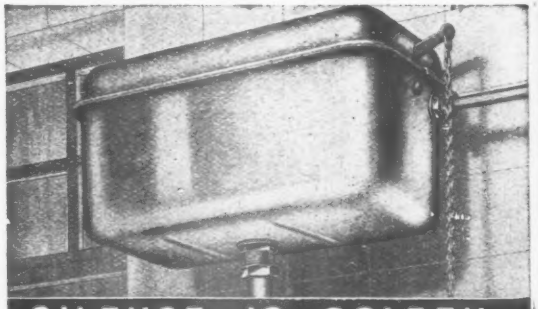

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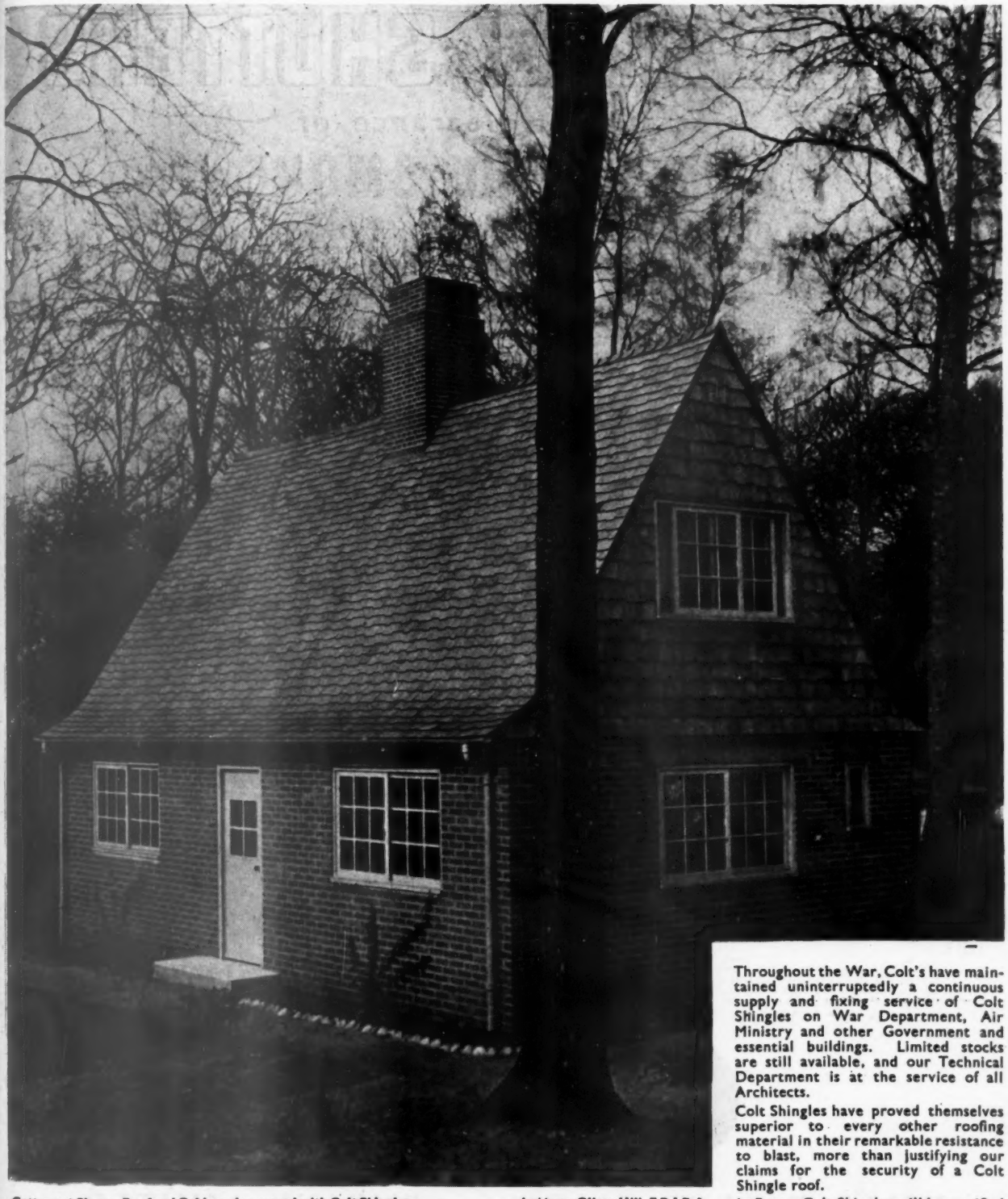

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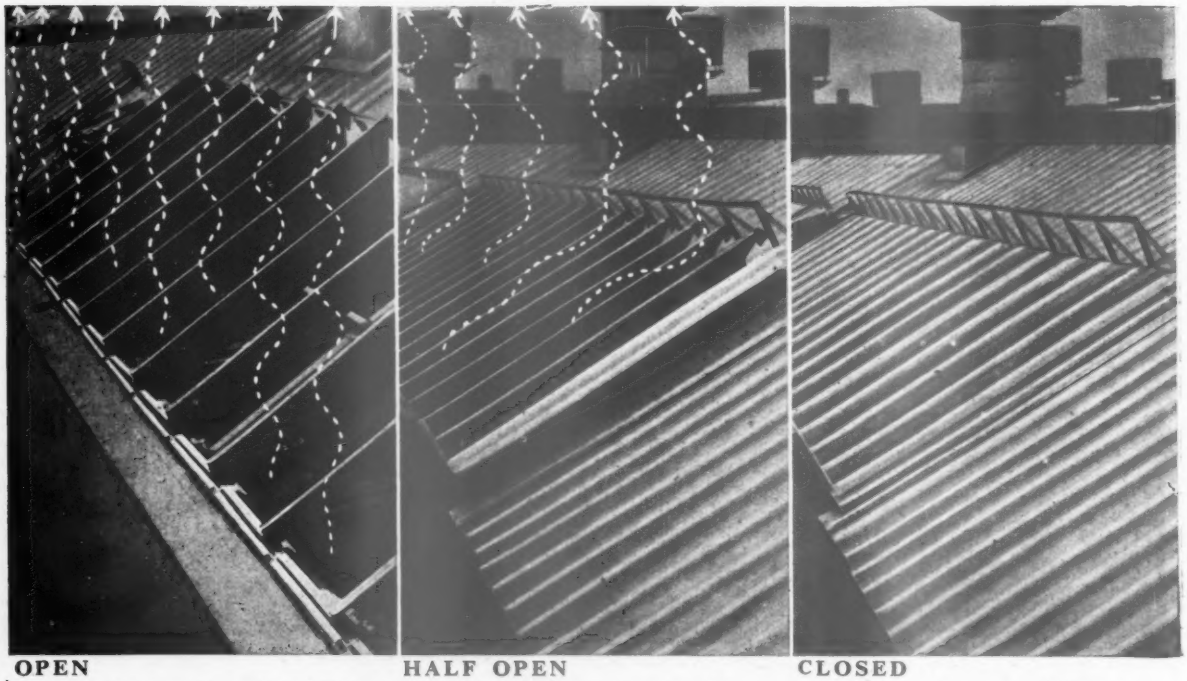

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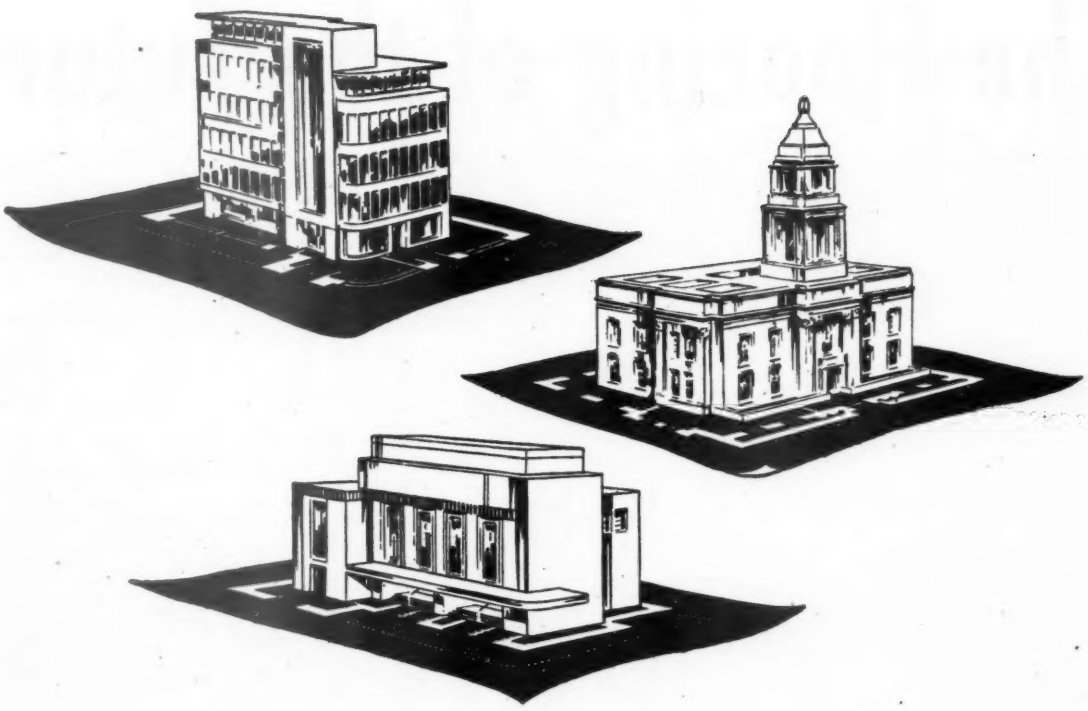

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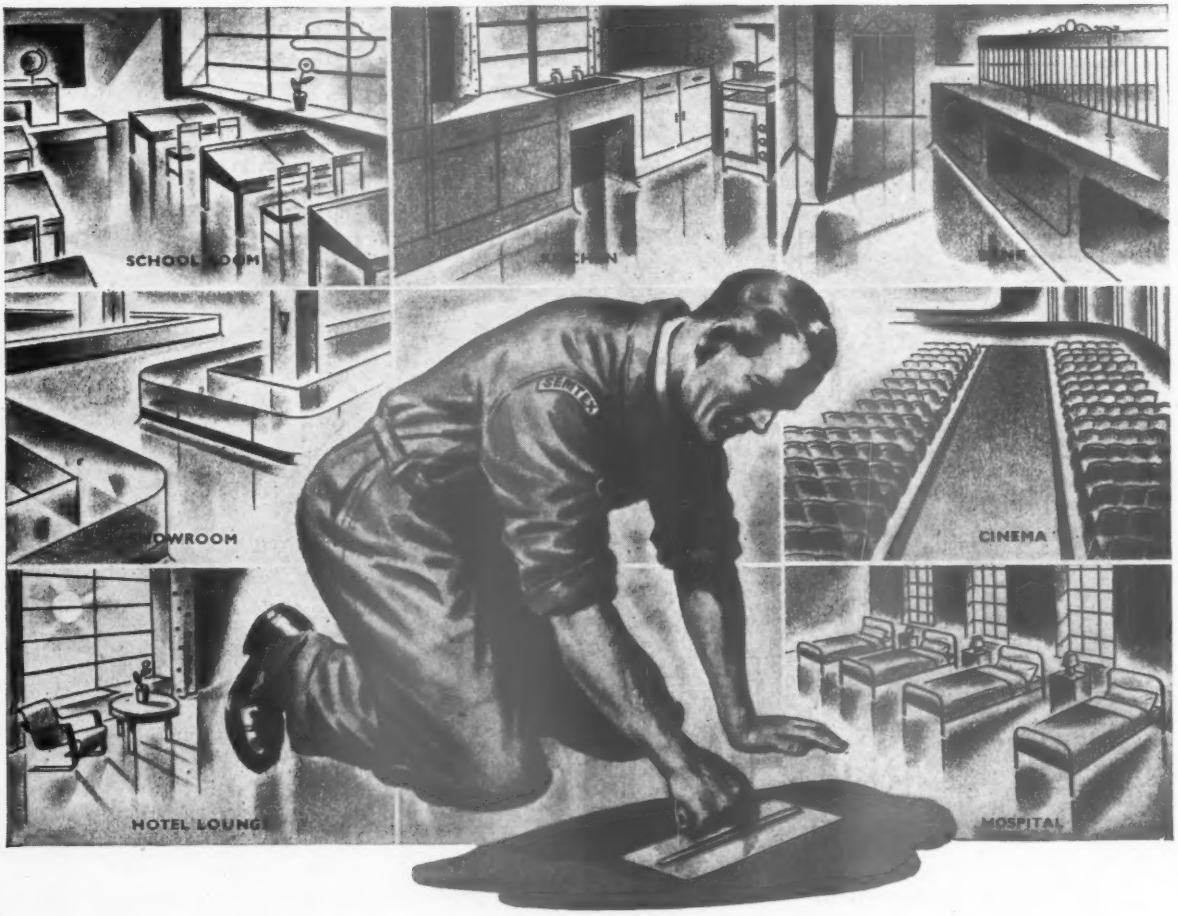

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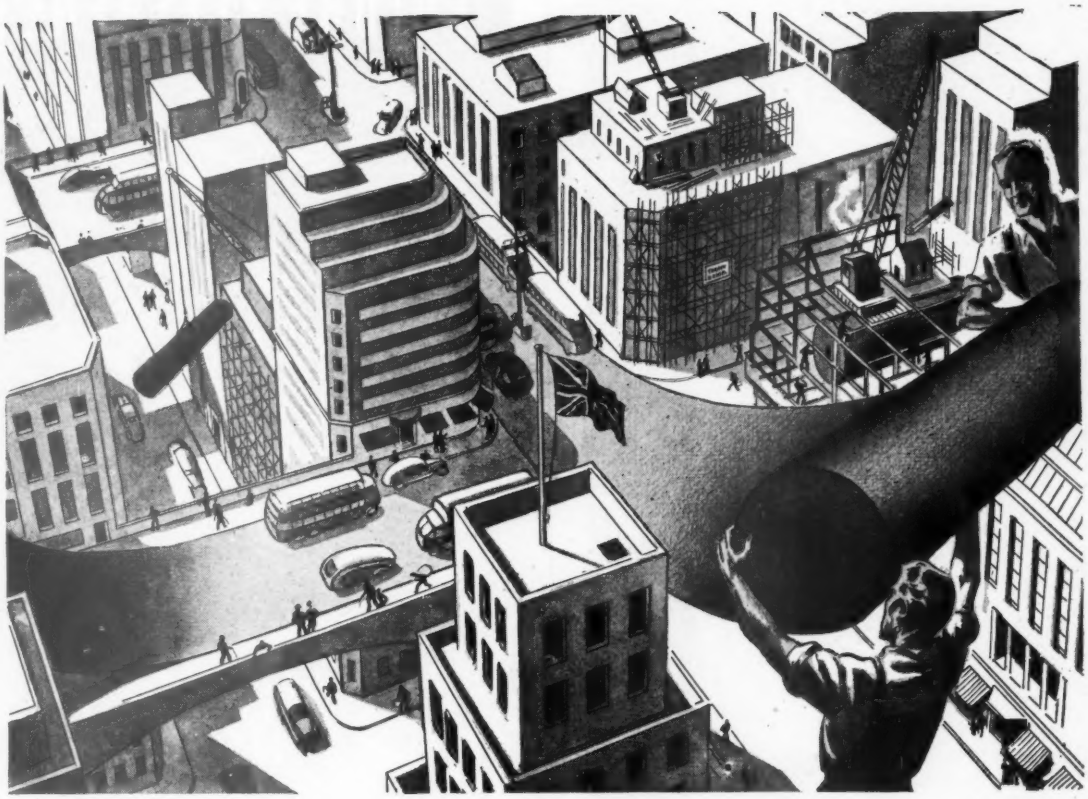

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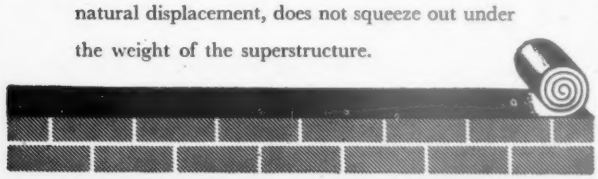

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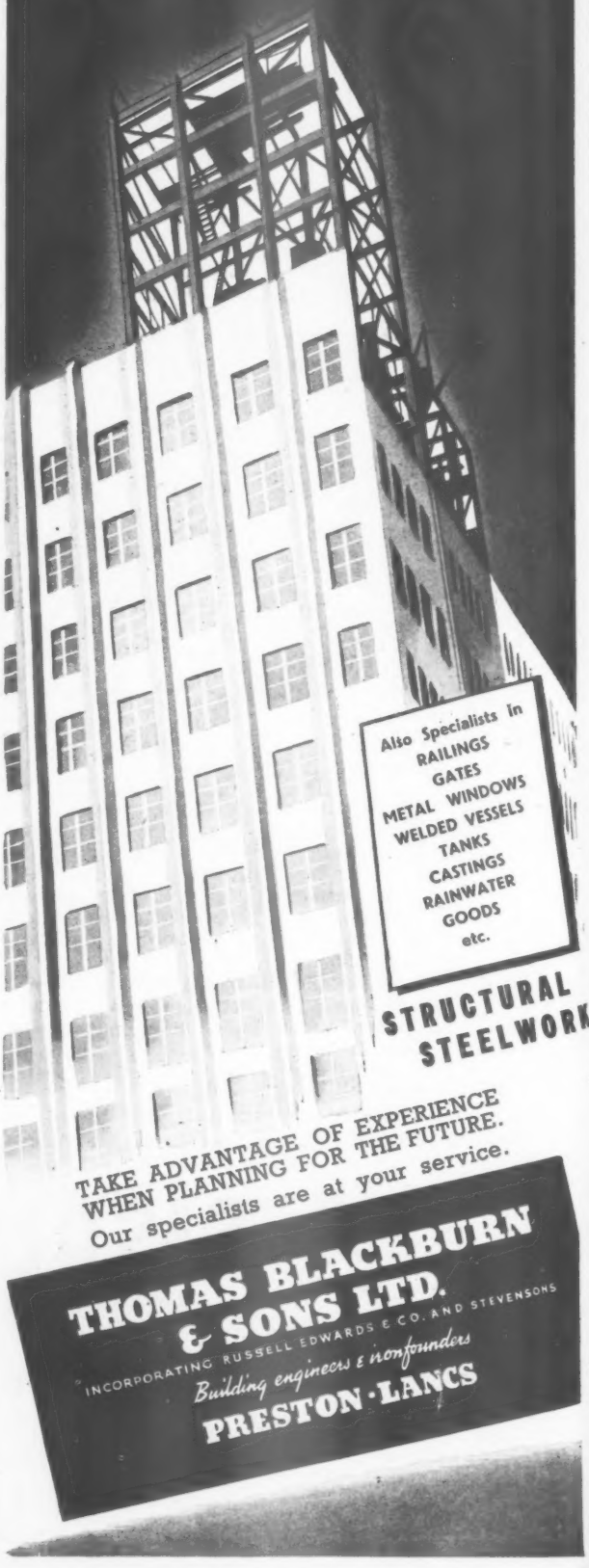

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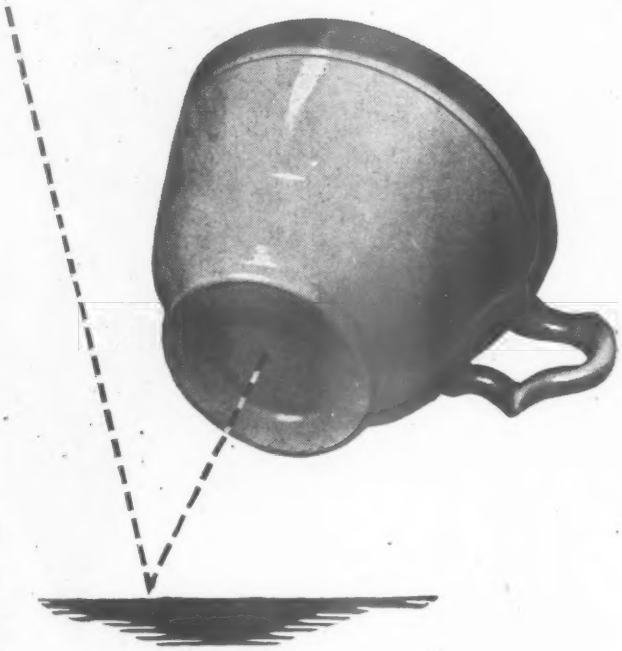

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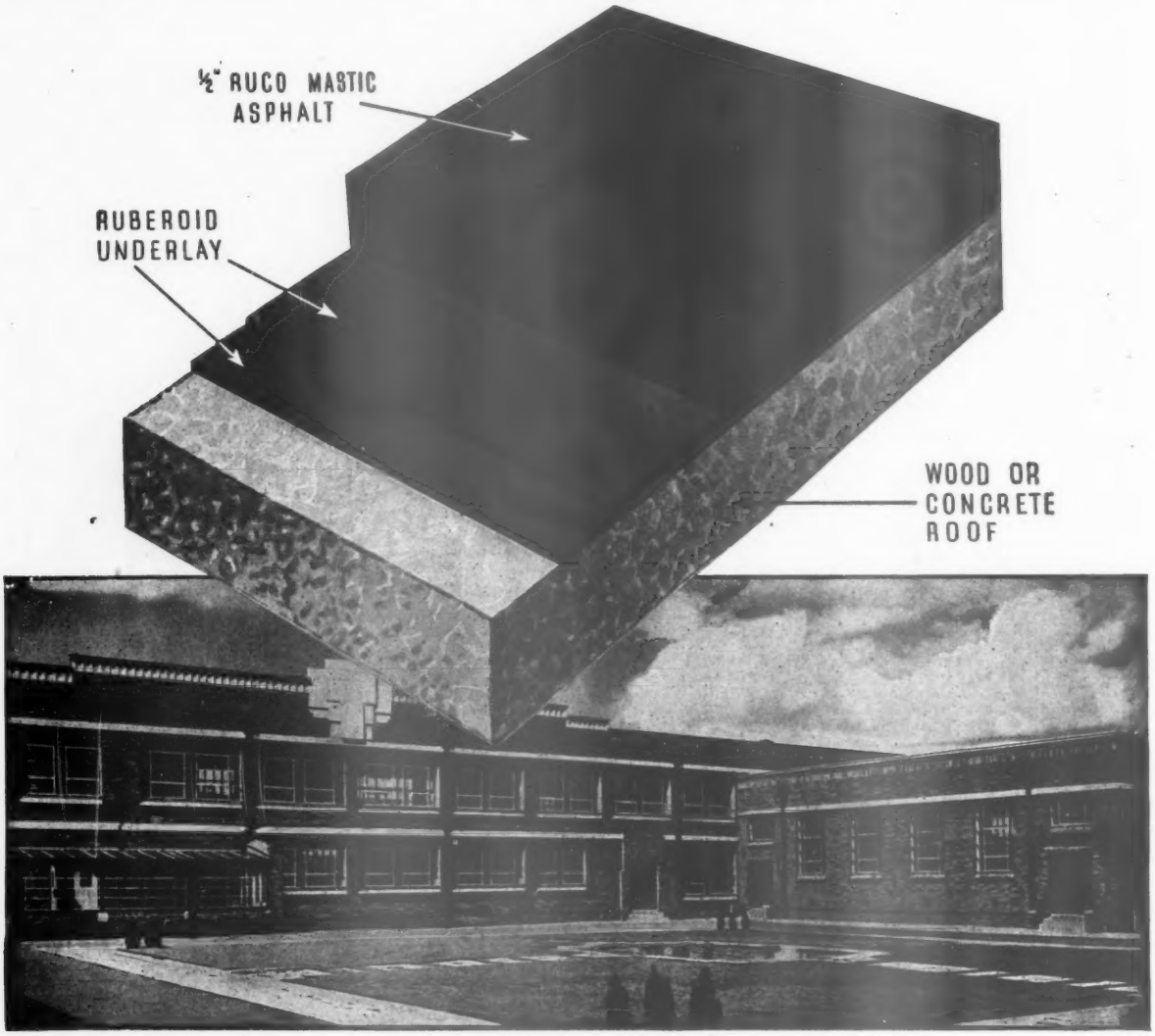

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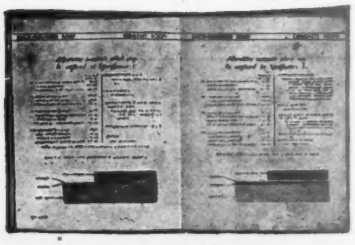

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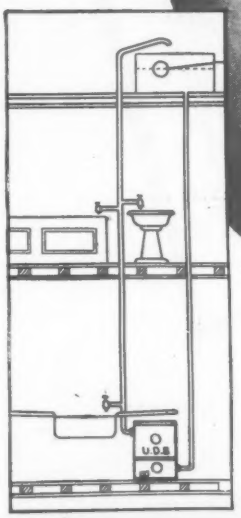

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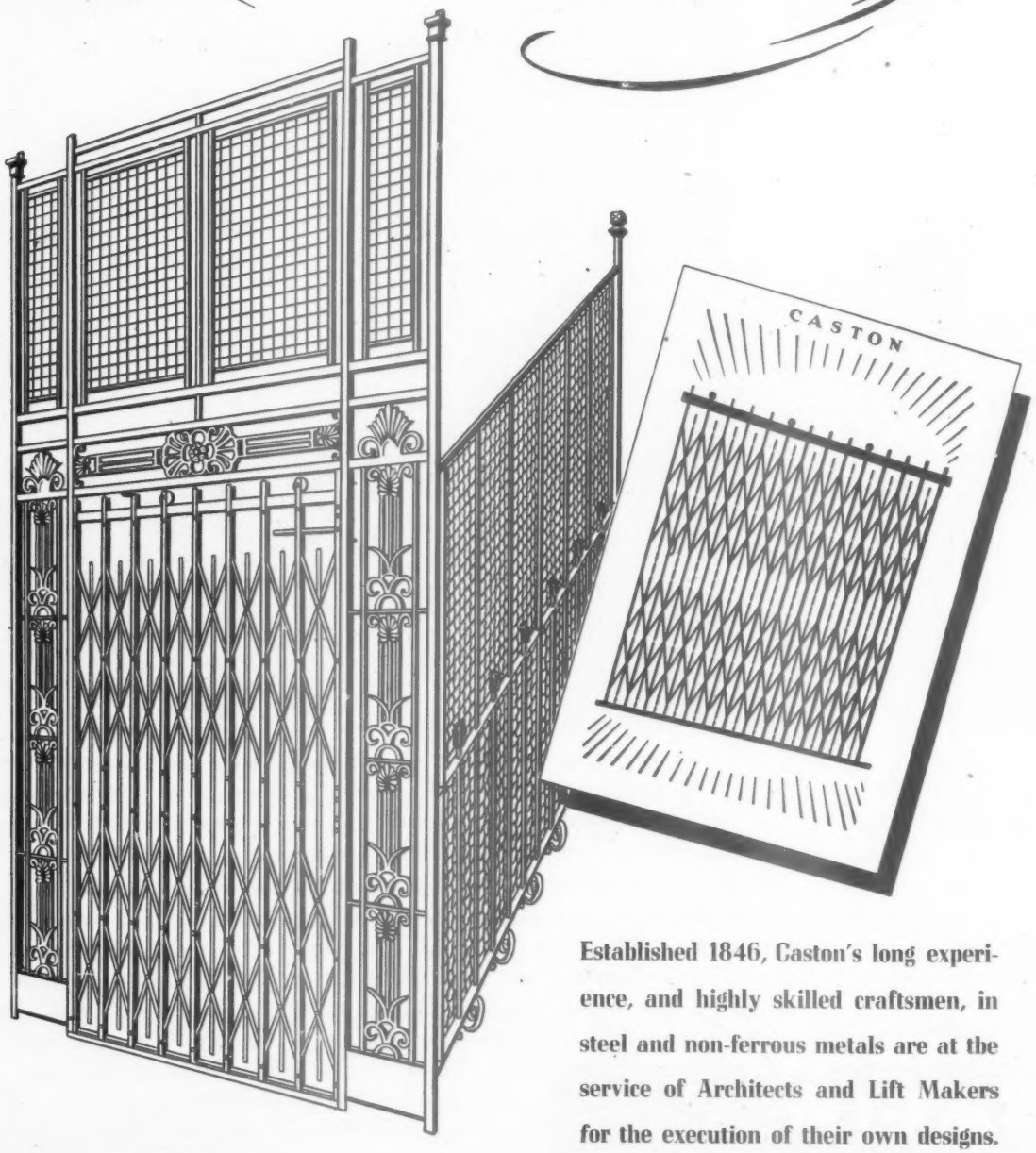

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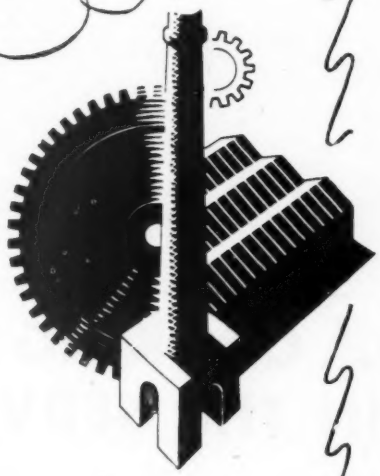

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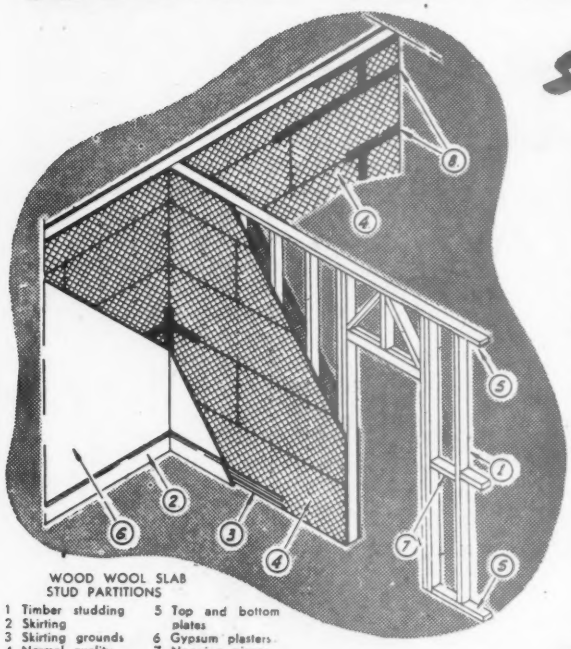

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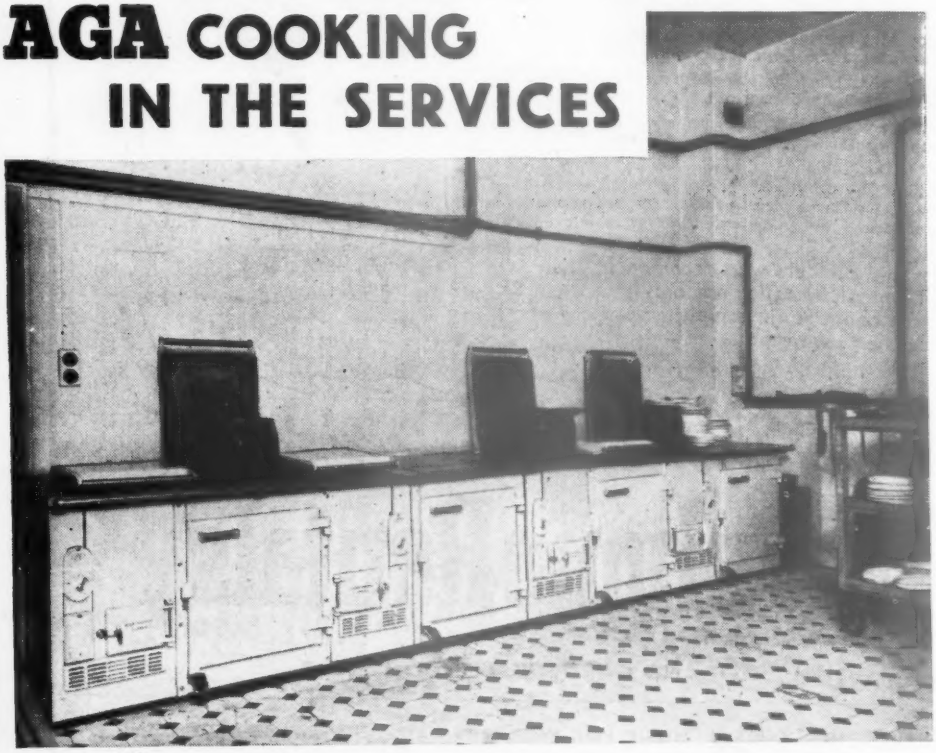

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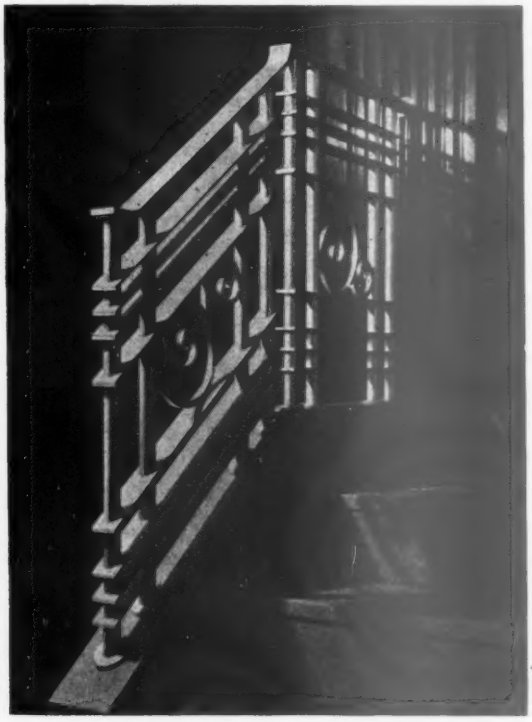

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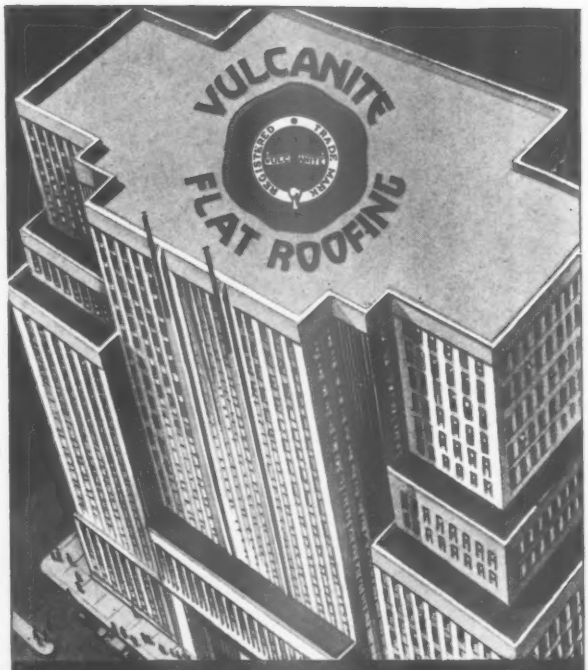

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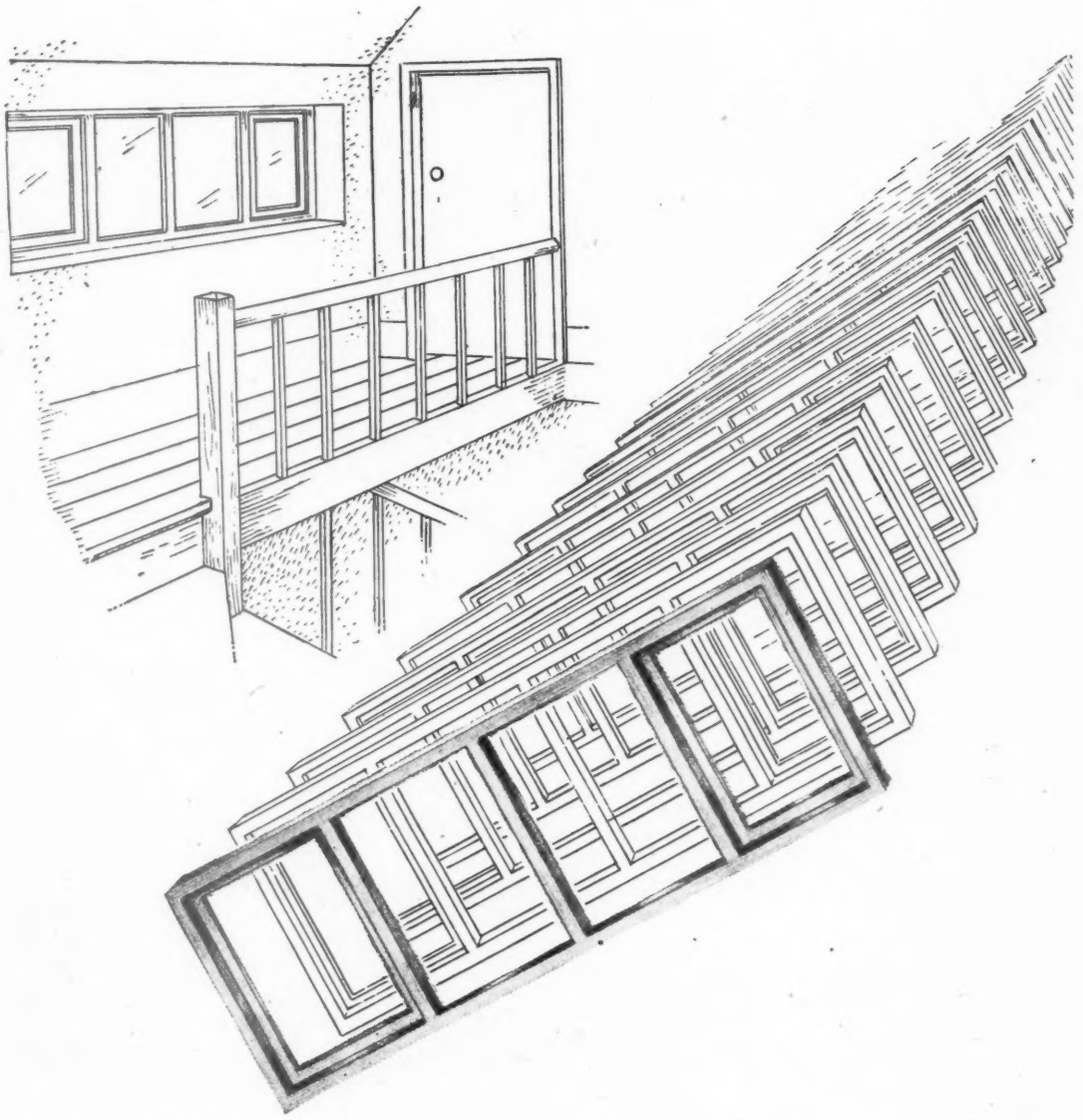

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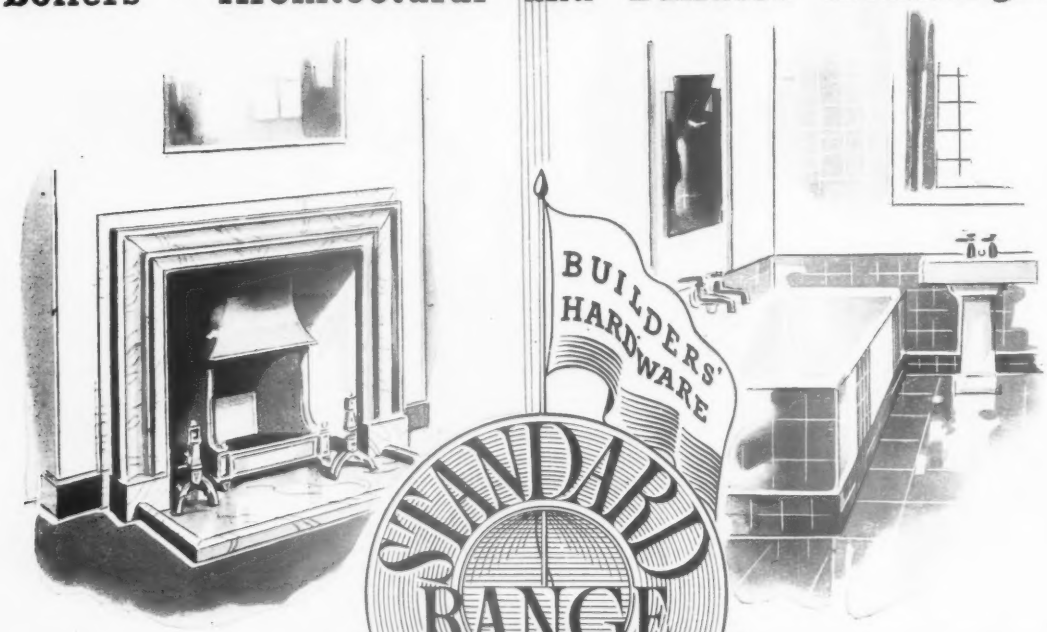

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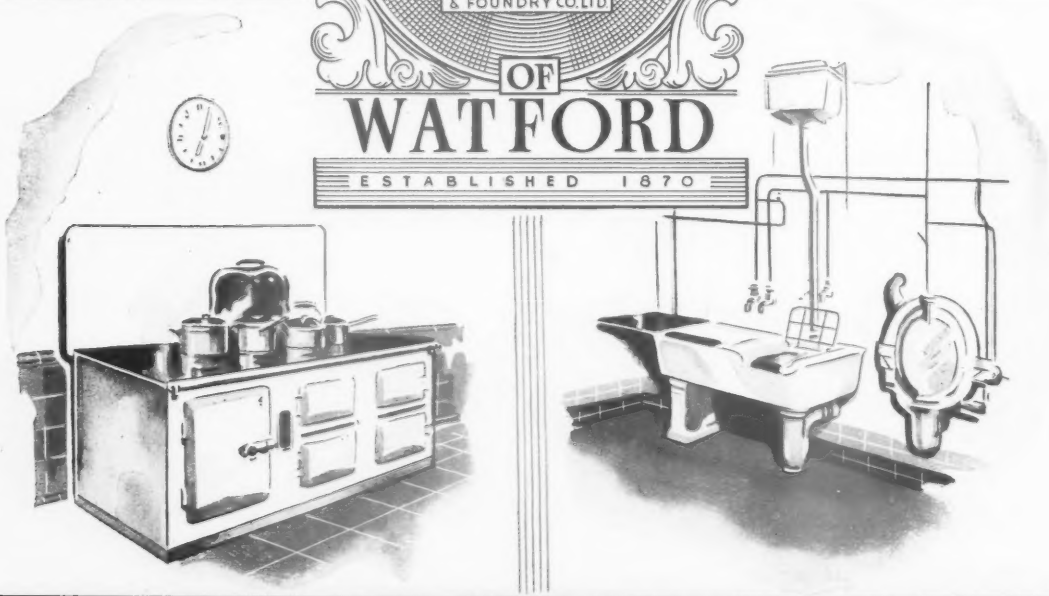

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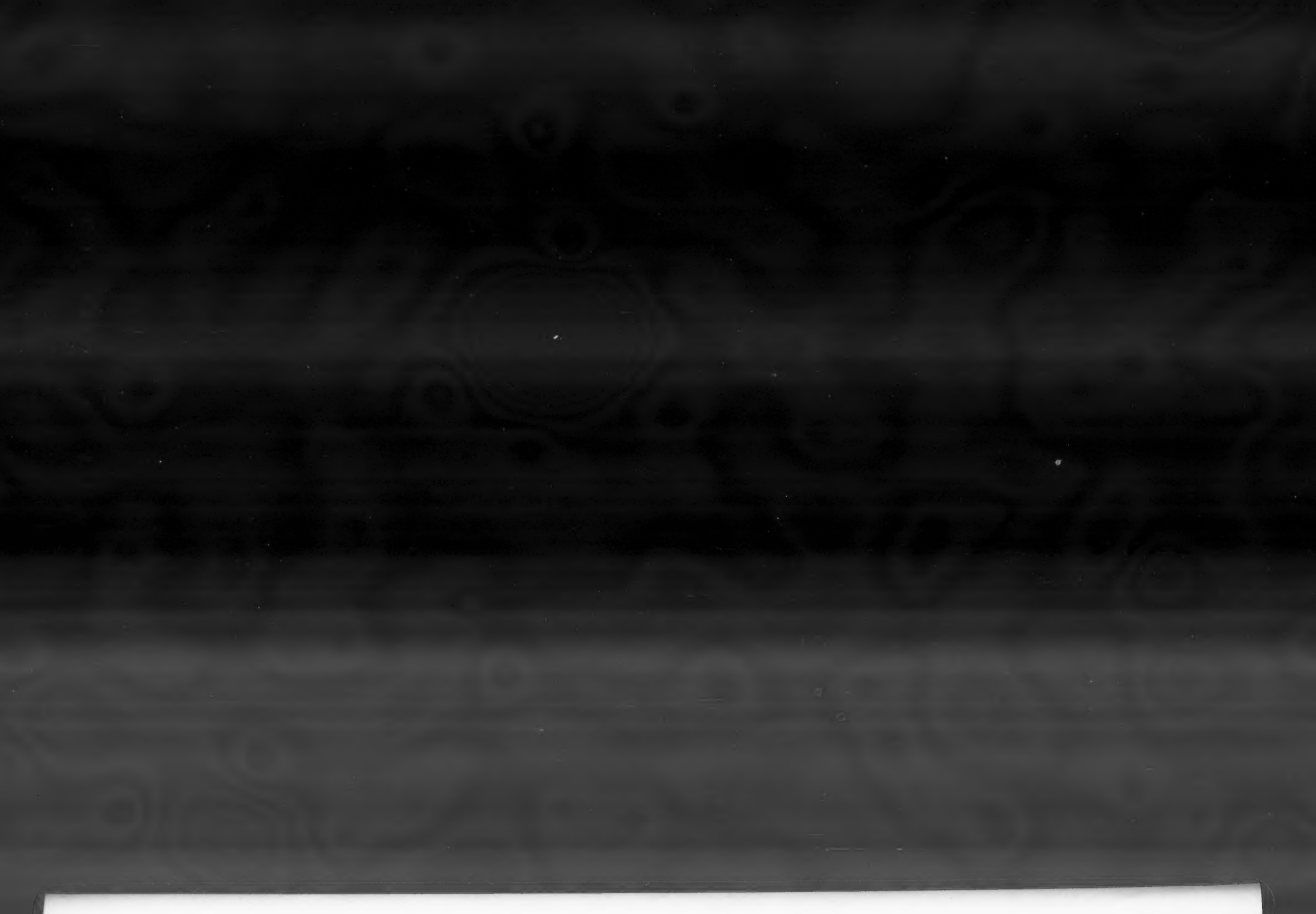

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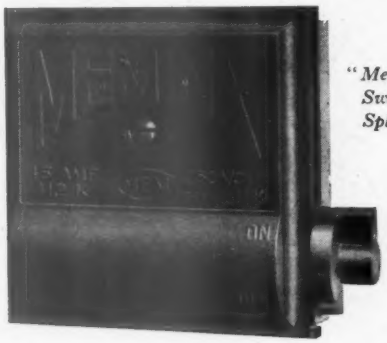

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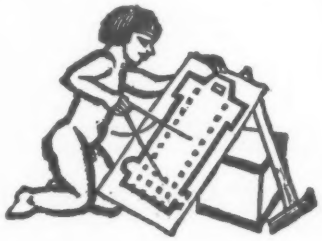

DIARY FOR OCTOBER NOVEMBER AND DECEMBER

Titles of exhibitions, lectures and papers are printed in italics. In the case of papers and lectures the authors' names come first. Sponsors are represented by their initials as given in the glossary of abbreviations on the front cover.

BIRMINGHAM. *Housing Equipment Exhibition.* At the West End Dance Hall, Suffolk Street, Birmingham. The exhibition, prepared by MOW, illustrates the principal items of housing equipment as recommended in *Housing Manual, 1944,* and the advances possible in the standard of equipment available in post-war housing as a result of the employment of mass production methods. (Sponsor, MOH). OCT. 25-NOV. 11

BUXTON. *When We Build Again.* Exhibition and Film. (Sponsor, TCPA, in collaboration with Messrs. Cadbury Bros.) OCT. 19-21

CAMBRIDGE. *Rural Housing.* Exhibition. (Sponsor, HC). OCT. 19-NOV. 6

COVENTRY. *Living in Cities.* Exhibition. (Sponsor, BIAE). OCT. 23-NOV. 6

Homes to Live In. Exhibition. (Sponsor, BIAE). OCT. 19-23

DONCASTER. *Rebuilding Britain.* Exhibition. At Doncaster Council of Social Service. (Sponsor, BIAE). OCT. 19-21

DURHAM. *When We Build Again.* Exhibition and film. (Sponsor, TCPA, in collaboration with Messrs. Cadbury Bros.) NOV. 12-18

HERTFORD. *Homes to Live In.* Exhibition. Land Army Tour. (Sponsor, BIAE). OCT.-NOV.

IPSWICH. *Homes to Live In.* Exhibition. At the Central Premises of the Industrial Co-operative Society. (Sponsor, BIAE). OCT. 21-NOV. 6

LONDON. *Water Colour Drawings of H. S. Merritt.* Exhibition. At the Batsford Gallery, 15, North Audley Street, W.1. (Sponsor, Batsford, Ltd.). Monday to Friday, 10 a.m. to 4 p.m. OCT. 19-NOV. 3

The Engineer's Part in Certain Post-War Problems. Discussion. At the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, IEE). 5.30 p.m. OCT. 23

Sir Albert Howard. *Fresh Food and Town Planning.* At 2, Savoy Hill, W.C.2. Chairman, Lord Portsmouth. (Sponsor, TCPA). 1.15 p.m. OCT. 19

Miss Helen Masters (Battersea Polytechnic). *Housework and Budgeting.* Discussion No. 5 in *Education for Householding* Series. At 13, Suffolk Street, S.W.1. (Sponsor, HC). 1.15 p.m. OCT. 24

Timber Conference. At No. 2, Committee Room, London Chamber of Commerce, 69, Cannon Street, E.C.4. Conference of the Timber Trade and Allied Industries, arranged by the Timber Development Association to discuss the post-war timber position. 2.15 p.m. OCT. 25

F. L. Barrow, of the Building Research Station. *Prefabricated Plumbing.* At the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W.1. Chairman, Percival T. Harrison, Vice-President of the Institute. 2.30 p.m. OCT. 25

Herbert Read. *Decentralization of Art.* At 2, Savoy Hill, W.C.2. Chairman, F. J. Osborn. (Sponsor, TCPA). 1.15 p.m. NOV. 2

Dr. R. F. Sudell. *The Garden* At 13, Suffolk Street, S.W.1. (Sponsor, HC). 1.15 p.m. NOV. 7

F. C. Fuke. *Electrical Accessories for Domestic Purposes; some Notes on their Design and Installation.* At Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, IEE). 5.30 p.m. NOV. 9

LOWESTOFT. *Town House.* Exhibition. (Sponsor, HC). OCT. 19-21

LUDLOW. *Twenty Women at Home.* Exhibition. (Sponsor, HC). OCT. 21-30

Living in the Country. Exhibition. (Sponsor, HC). OCT. 21-28

Town House. Exhibition. (Sponsor, HC). OCT. 21-28

RYTON-ON-DUNSMORE. *Good Neighbour.* Exhibition. (Sponsor, HC). OCT. 23-30

STAMFORD, LINCS. *When We Build Again.* Exhibition. A conference will be held by the Town and Country Association on the first day of the exhibition. Speaker, R. L. Reiss. (Sponsor, TCPA). OCT. 21-28

Twenty Women at Home. Exhibition. (Sponsor, HC). OCT. 19-26

Traffic. Exhibition. (Sponsor, HC). OCT. 19-26

WEYMOUTH. *Rebuilding Britain.* Exhibition. At South Dorset Technical School. (Sponsor, BIAE). OCT. 19-21

NEWS

THURSDAY, OCTOBER 19, 1944
NO. 2595. VOL. 100

Though no feature in the JOURNAL *is without value for someone, there are often good reasons why certain news calls for special emphasis. The* JOURNAL'S *starring system is designed to give this emphasis, but without prejudice to the unstarred items which are often no less important.*

★ *means spare a second for this, it will probably be worth it.*

★★ *means important news, for reasons which may or may not be obvious.*

Any feature marked with more than two stars is very big building news indeed.

A strong protest is made by the Chartered Surveyors' Institution against a clause in the TOWN AND COUNTRY PLANNING BILL which it states appears to allow Government Departments to usurp the functions of the Courts.

This clause concerns the purchase of war-damaged land by authorities, and the council of the Institution states: It is noted that, not only is a further authority in the shape of the War Damage Commission, introduced, from whom a decision must be obtained on questions arising under "reasonable beneficial use," but that this would also seem to endow the Minister of Town and Country Planning and the War Damage Commission with power to construe the meaning of legislation.

Three committees of the Manchester City Council have REJECTED A THIRTY-EIGHT MILLION POUNDS TUBE RAILWAY.

A proposal to build a £38,000,000 tube railway at Manchester, as suggested by the railway companies, has been rejected by the Post-War Reconstruction, Town Planning and Transport Committees, who recommend the City Council not to go on with the scheme.

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From AN ARCHITECT'S *Commonplace Book*

PROGRESS AND ROMANCE. [*From* Jules Verne, *by Kenneth Allott* (*The Cresset Press*).] I have pointed out that the romantic feeling for the terrible and the mysterious pandered to industrial ugliness by making it appear inevitable and queerly beautiful. For signs of this attitude I refer readers to James Nasmyth's drawing of the Dannemora Iron Mine, where the industrial detail sets off the macabre apocalyptic landscape ; to Nasmyth's remark on the ruins of Dudley Castle, " Their melancholy grandeur is rendered all the more impressive by the coal and iron works with which they are surrounded —the olden type of buildings confronting the modern " ; and to Verne's lyrical description of broken machinery in *Child of the Cavern*. Decay was what appealed to the romantic spectator here ; machinery was almost better than Gothic castles. . . . Leopold Martyn, writing of his father, John Martyn, the painter, who rejoiced in sadistic images of destruction and terror, and chose subjects like Nineveh or the Biblical Flood, expresses nicely the ambiguity of an artist's feelings for the new technical world. " As he (John Martyn) passed through the Black country at night, the glow of the furnaces, the red blaze of light, the liquid fire, seemed to his mind truly sublime and awful." The romantic embrace of technical ugliness is there in germ in the liking for nature at her wildest and most tortuous : and in itself this liking is a reflection of the cult of feeling that is diametrically opposed to mechanical systems of thought.

★

The root trouble with so much of the most recent housing development, is that it is a mere epiphenomenon of a social and economic set-up which is itself UNNATURAL AND WITHOUT VALID PURPOSE.

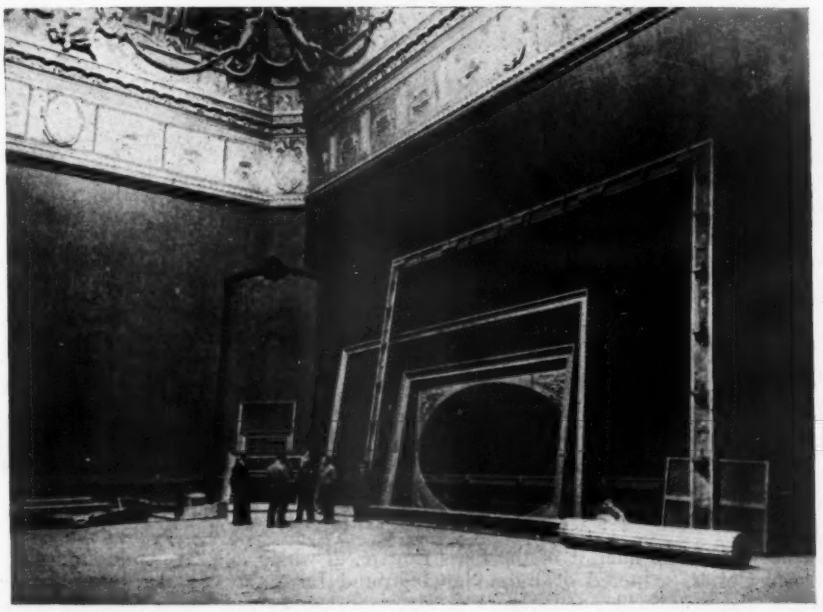
This opinion is expressed in a report drawn up by the Social and Industrial Commission of the Church Assembly, after an inquiry lasting a year under the chairmanship of Sir Montague Barlow. As a consequence this housing development, says the report, fails to satisfy the basic psychological needs of men and women in at least five ways:— In the limitations it imposes on family needs by its restriction of domestic space; by its lack of connection with man's vocational life; by its encroachment upon leisure, and the imposition of rush-hour conditions involved in its remoteness from the scene of work; by its false isolation and lack of facilities for a natural community life; by the hemmed in character of the environment it creates, which forbids opportunities for withdrawal. The report sums up as follows the points to which the Commission thinks the Church, and church folk generally, should direct keen and continuous attention. Slum clearance should be vigorously pressed on, and the policy of redevelopment of congested urban areas accelerated, coupled with dispersal, or decentralization, from those areas to healthier homes farther afield in accordance with a national plan. Such dispersal, whether to garden cities, satellite towns, or existing inhabited areas, must be based on the principle of the living community, with adequate facilities not only for housing, but also for living, working, and recreation; a community in which local life is developed and the moral and spiritual needs of the population are generously cared for in churches, chapels, schools and institutes. Alike in redeveloped urban areas and in new or enlarged centres of population, good housing accommodation is essential, with proper restrictions on density of houses an acre, and of room content a person. Houses must be sufficiently supplied with running water, sinks, and lavatories, and all possible provision made for play space and for gardening space where gardens are required. Generally large blocks of flats are to be discouraged, but where flats are unavoidable, in the case of workers who must be on call day or night, and therefore live near their work, every effort should be made to restrict the flats to a moderate height, to secure proper provision of space and light, and to safeguard the children. As recommended by the Scott report, more adequate provision must be made in many villages for better housing, water supply, and sanitary services; and medical, educational, and recreational opportunities must be secured to those living in rural communities on lines as ample as those enjoyed by town residents. The report will be presented to the Assembly when it meets from November 13 to 17. It is published at 2s. by the Press and Publications Board at 2, Great Peter Street, Westminster, S.W.1, and by SPCK, Northumberland Avenue, W.C.2.

Foreshore reclamation, a yacht harbour, swimming pools, a new town hall and a widened esplanade are among SOUTHEND'S POST WAR PLANS.

At a meeting of the council when the plans, drawn up by a special committee, were discussed, Alderman W. Miles, the Mayor, said that Southend of 1994 may be a city of at least a quarter of a million people.

The Coventry Council of Churches says that CITIES MUST CONSIST OF LITTLE TOWNS.

A city must be planned so that it is composed of a number of little townships, each with a measure of independent life of its own. In making this point in a leaflet *Our New City*, the Coventry Council of Churches states. A neighbourhood unit or township, of which a city must consist, is described as a portion of the city containing about 10,000 people, which is definitely marked off on all sides by wide highways, open spaces, or other clear boundary. Each neighbourhood unit should have a community centre for social gatherings, schools, facilities for games and physical recreation, a health centre, a library, and a place of amusement, says the council. Factories should be within easy reach, but separated from the dwellings by a belt of green fields. Churches should be so planned that they have a chance of helping citizens to live the good life in the highest sense.



Giant empty picture frames in the Louvre, Paris, now waiting to be filled again in the near future. See also this week's frontispiece.

The Louvre Still Lives

A solemn wartime interior of the Paris Louvre, to which its former glories, scattered or buried underground for safety during the war, will soon return. As reported in the JOURNAL last week, the Bayeux tapestry itself has now found sanctuary in its vaults. Luckily, according to all available information, only private collections have been looted by the enemy, and no French national treasures have been removed to Germany. Until the war is over, however, Parisians will no doubt have to be resigned to gazing on a mere plaster copy of Venus de Milo.

★ *At the public inquiry into the Lincoln power station scheme Mr. G. A. Jellicoe, described the proposed two 230 ft. high cooling towers as colossal structures which would be LIKE CARBUNCLES ON A MAN'S FACE.*

The public inquiry—first suggested by the Bishop and the Dean of Lincoln in a letter to *The Times*—was held by Sir Cyril Hurcomb, chairman of the Electricity Commissioners into the proposal to erect two 230ft. cooling towers as part of the Lincoln corporation's electricity power station. Sitting with him were Sir Leonard Pearce, a fellow commissioner, and Mr. G. L. Pepler, of the Ministry of Town and Country Planning. Opposition to the proposal was led by a committee of Lincoln residents, of which the Bishop is chairman, on the ground that the towers would interfere with the view of Lincoln Cathedral. Mr. E. J. C. Neep, for the corporation, declared that only in one place could the towers interfere with the view of the cathedral. Exhibiting photographs, he added that there were only three roads from which the view would be obstructed, and even a haystack or a farm building on these roads would obstruct the view. Referring to the famous picture of the cathedral painted 150 years ago by Peter de Windt, Mr. Neep said that, forgetting the towers, if de Windt came back to-day and put himself in the same spot as that from which he painted the picture he would find a great deal between him and the cathedral to interfere with his view. Mr. F. Newey, City Electrical Engineer, disagreed with the suggestion that the towers competed with the cathedral in any view in which they both appeared. The Dean of Lincoln, the Very Rev. R. A. Mitchell, said that there was no doubt the cooling towers would spoil the view of the cathedral. He said: The real peculiar splendour of Lincoln Cathedral is not the inside but the outside, and if he had to show a stranger just one fleeting glimpse of this cathedral he would take him not inside but on to the Washingborough Road. (It was from his angle that Peter de Windt painted his famous view of Lincoln 150 years ago.) The towers might not block the view, but by being part of the landscape they would distract attention from everything else, and throw the whole view out of perspective. The Bishop of Lincoln, the Right Rev. H. A. Skelton, chairman of a committee opposing the scheme, hoped that some other suitable site might be found or some other method evolved for supplying it. Mr. G. A. Jellicoe, president of the Institute of Landscape Architects, and chairman of the RIBA Housing Committee, described the towers as colossal structures which would be like carbuncles on a man's face.

To ensure full time education for all children local authorities are to make an immediate SURVEY OF EVERY WAR-DAMAGED SCHOOL, within twenty miles of Charing Cross.

Schools will be dealt with on the same standards as dwelling-houses, and only the necessary work to make them weatherproof and habitable can be undertaken. All further work will be postponed until more substantial work on houses can be done. The Ministry of Education has asked all authorities concerned to submit details immediately, so that the question of allocating the labour required may be considered without delay.

WHAT SIZE OF MODULE?

THIS is pre-eminently the time to lay down the bases for standards. Already the United States has made a beginning on an important aspect of standardization, that of modular co-ordination, a matter which was dealt with in a general way in our leading article for October 5. Let us be clear what we mean by a module. A module is an increment of size, a cubic scale, and elements work to the module by the elaboration of fixing details. Thus, the critical size is always the fixing dimension, which will be a multiple of the module and will include an allowance for the joint. Products designed on the 4-inch module will, therefore, fix at multiples of 4 inches and the jointing tolerance will be worked out as necessary for each product.

In this country there is a difference of opinion as to whether 3 inches or 4 inches is the most suitable basic module to adopt. It is argued that 3 inches is a more British figure and corresponds to the accepted brick size. We indicated in our previous article that the size of a brick is no suitable criterion of the correctness or otherwise of a module, since the modular system becomes necessary primarily when bricks cease to be generally used. It is an advantage, of course, to have a modular brick and of all manufactured products the brick is most readily changed in size if need be. A 4 inch by 8 inch nominal brick would be a small change to make to secure an international module.

A small module of 3 inches or 4 inches does not of itself solve the problem of co-ordination. It is manifestly inadequate to cope with the large-sized building products now being turned out and which already work to larger increments than 3 inches or 4 inches. In point of fact, most prefabrication is based upon modular grids ranging from 2 feet 0 inches to 4 feet 0 inches. A modular system, to be effective, will have to embrace materials and planning requirements throughout a wide size-range, and a compound system suggests itself, such as, for example, a 4-inch module to take care of the smaller elements combined with a 3 feet 4 inch module (which is ten times the smaller module) for the larger materials and as the basis of the planning elements. Whatever system is adopted should be based upon the most careful evaluation of all factors, for an inefficient module will do more harm than good, as all inefficient standards do.

There are certain basic principles that must be taken into account in deciding on a module and of these the most important is that it shall be in human scale. The human being requires a lintel height of 6 feet 8 inches, a bed length of 6 feet 6 inches with a width of 3 feet 0 inches, a minimum passage width of 3 feet 0 inches clear, and so on. Such figures set the possible size range of the module within very narrow limits ; 3 feet 0 inches is too small and 3 feet 6 inches is on the ample side. The Japanese, who are a smaller race than we, have for centuries used a module varying between

3 feet 0 inches and 3 feet 6 inches with very satisfying results. Indeed, their unsurpassed domestic work is a good answer to those who feel that the adoption of a module would cramp design.

A second principle is that the module shall have international application. It now becomes possible, for the first time, to envisage a great international exchange of manufactured building products. The basis for this is universal dimensional co-ordination. Make no mistake, there will be no international market for us if we adopt a purely local standard. We stress this because of the tendency to put forward the English yard and the 3-inch module as suitable bases for our standards. Nothing could be more fatal. The States are going for 4 inches and, embryonically, for 3 feet 4 inches. The Continent, when it begins to think of these things, will probably plump for 10 centimetres and 1 metre, which is almost the same thing. The metric module will, in fact, be the most nearly universal. If we decide on a system based on 3 inches there is a great danger that we shall become isolated.

We have suggested that the RIBA should examine this problem of the module. We now suggest that it should be taken immediately to the international level for discussion.

The Architects' Journal
War Address: 45, The Avenue, Cheam, Surrey
Telephone: Vigilant 0087-9

NOTES & TOPICS

COMPENSATION DEADLOCK

When ploughing through Hansard, one sees how quickly issues which are fundamentally simple and obvious, can become bogged in a dialectical morass until, though feelings run high, no one finally seems to understand quite what the argument is about or what are the ultimate objectives.

*

Take, for instance, the committee stage debate on the Town and Country Planning Bill. All responsible individuals and authorities, including the RIBA, now realize that physical planning, if it is to be a long-term success of both cultural and economic benefit to the whole community, *must* be co-ordinated at the national level, starting with the proper location of industry. We know, in fact, quite clearly what should be done for the best.

*

And yet Members of Parliament have not progressed beyond debating whether or no blighted as well as blitzed areas should now be replanned. John Dugdale, M.P. for West Bromwich, drew a simile: "Supposing a man came into hospital having been wounded in the arm, and also suffering from appendicitis. What would anybody think of the doctor who said 'You must deal with the arm because it is a war injury, but on no account must you deal with the appendicitis, because it might just as well have been contracted in peace-time.'"

*

That is a good analogy, but it doesn't go far enough. Every doctor knows that the body functions, and must be treated, as a whole, and that the superficial cure of symptoms does not itself bring general wellbeing. Cure the arm and cut out the inflamed appendix, of course, but don't expect to obtain full health without cleaning out the clogged intestines as well.

Arising naturally from this blitz-blight controversy is the basic problem of compensation, which was bound to create a deadlock. This itself cannot be solved unless treated on a national scale so that betterment and worsement can form an evenly distributed balance.

*

The way matters are going in housing and planning fills one with a too familiar feeling of exasperated frustration. An unprecedented, and maybe fleeting, chance has come along to alter our environment in a radical way for the final benefit of every person in the land. One doesn't expect disinterested altruism from the well entrenched vested interests, but one does hope for a little more enlightened self-interest.

WAR MEMORIALS

At this stage in the tide of events, one's mind almost automatically turns to war memorials. I have recently been talking to a friend back from France. He said, "The striking thing about French war memorials is not so much that they all seem to be the same, but that they have chosen to standardize such a bad design. They all seem to consist of a Poilu in an attitude rarely seen outside the music-halls, an attitude which one can only describe as one of suicidal defiance. The Poilu on the pedestal doesn't expect victory; he wouldn't know what to do with it if he got it."

*

My own plan for memorials for this war is simple. It is to carve under the inscription on the existing memorials the words, "Also to commemorate those who died in the Second World War." If the memorial already claims that those who died between 1914 and 1918 died for everlasting world peace, so much the better. The idea may be novel, but a touch of realism in our memorials might be all to the good.

*

CO-OPS. COME TO TOWN

As Arch-enemy of the Co-ops., Lord Beaverbrook must have been pained to report in his newspapers that the London Co-operative Society had acquired—all within a few days—a suburban department store, sixteen chemists' shops, and an Oxford Street

block formerly occupied by part of the Peter Robinson store.

*

The opening of an Oxford Street branch (when the present Government tenants move out) will mean more than the mere addition of one to the London Co-op.'s vast total of branches; it will mean that the Co-operative movement has, for the first time, a shop window in the West End of London.

*

What use the movement will make of this window remains to be seen; but at present any window-gazer will admit that a general improvement in the design of Co-op. goods is called for. Co-op. design is never outstandingly good, sometimes outstandingly bad, generally mediocre. Through the competition of department stores and snootier *salons*, the West End can hardly fail to have a stimulating effect on Co-op. dress design at least, but there is just as much room for improvement in other departments besides dress—in cutlery and crockery, fabrics, furniture, *and* architecture.

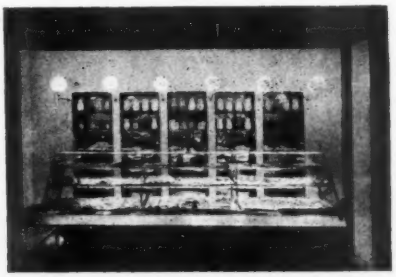
*

"Our shops, equipment, and service must keep step with those of our competitors," a Co-op. propagandist wrote recently. "Indeed, the movement must lead the way." Heaven knows, this country's Co-op. movement, a hundred years old and enormously wealthy, can afford to make enterprising use of enterprising designs if they want to, but in the face of all the evidence one must conclude that in the past they have not wanted to.

*

There is nothing in Co-operation as such that is hostile to good design. To be assured of that, you need only remember the high standards achieved by the Co-operative Society in Sweden before the war both in its architecture and designs in general. Let us hope that fumes of Oxford Street have the same stimulating effect on Co-operative design as Swedish air.

ASTRAGAL



Co-operative Society design in Stockholm. Top left. Drottninggatan, 16, for general provisions. Top right, the bakery at Storgatan, 28. Above, Konsumhuset, one of the principal provision shops having separate departments for grocery, bakery and dairy. See Astragal's note.

LETTERS

Dennis Rider

Ernest A. Newton

Stirling Malloch

A. G. R. Mackenzie, F.R.I.B.A.

POW Stage a Replanning Exhibition

SIR,—I wonder if you have heard that in Oflag 79 in Germany, British prisoners of war are staging a replanning exhibition? This information is contained in a letter dated August 1 just received from my brother, Lt. L. S. Rider, who is apparently taking part in it.

They have managed to secure a lot of material for the display which seems to be comprehensive. It includes an historical section and a lot of new ideas. In August they had spent two months in preparation.

This is a worthy commentary on the spirit and hopes of our fellows in German hands.

New Malden — DENNIS RIDER

Shell Concrete · Construction

SIR,—You are to be congratulated on the fine article by Dr. K. Hajnal-Konyi dealing with Part I, Barrel Vaults in shell concrete construction. The article was well illustrated, and amplifies in a straightforward, simple manner, the data originally published in Information Sheets Nos. 815, 817 and 820.

I feel, however, that some reference should be made to the fact that the Zeiss-dywidag system is protected in this country under British Letters Patent No. 362473, for which I am the sole licencee.

Manchester — ERNEST A. NEWTON

Housing Manual, 1944

SIR,—The authors of *Housing Manual, 1944*, do not appear to have given any serious consideration to the problems of sound insulation, and it is to be hoped that those who are concerned with the provision of flats will not be misled into thinking that because plans of flats are shown in an official publication, they are necessarily good examples of planning.

To take but one example, Fig. 85, the two main bedrooms where quiet is most essential are placed next to the noisiest part of the building—the staircase and landings—while the living room and dining kitchen are next to the party wall, on the other side of which similar noise levels exist.

Consider the feelings of a person who has gone to bed early, perhaps not well and wanting to get a good night's rest—the stairs being concrete with probably hard plaster on walls and soffites will magnify the sound of people passing up and down the stairs and cause discomfort to the person trying to sleep.

Or, again, in the living room someone is trying to study while a party is in full swing in the living room of the adjacent flat—what hope is there of proper concentration?

Admittedly, these problems could be solved by full discontinuous construction, but this is expensive and, in any case, why design a flat so that increased costs for sound insulation are necessary when proper planning will reduce such costs to a minimum?

Ten or more years ago there might have been some excuse for such unintelligent planning, but in this year of grace, with all the information which is now available, there is no excuse at all.

Sound insulation must be considered right from the beginning when the first sketch plans are being prepared: the three noise zones must be indicated—the high-level zone, comprising the staircase, lift, landings, halls, kitchens, bathrooms, w.c.s, etc.; the medium zone, comprising the living rooms and dining rooms, which are alternately noisy and quiet; and the low-level zone, comprising the bedrooms, studies, etc.

The various rooms forming parts of the high-level and low-level zones should then be grouped together, with the medium-level zone forming a buffer between a high-level and a low-level zone.

On this principle the rooms in the high-level zones would be grouped round the main staircase and the low-level zones adjacent to the other party walls, with the living room acting as a buffer between the two zones.

A very good plan embodying these principles is given in Fig. 4A of the Building Research Station's booklet, *Reduction of Noise in Buildings*, and both this and their *Sound Transmission in Buildings* should be studied by all who are concerned with the provision of flats.

The BRS has devoted considerable thought to the problem of sound insulation in blocks of flats, as exemplified in the plans shown in *Sound Transmission in Buildings;* although they took as their example a flat for the higher income group, nevertheless the same principles apply to other types of flats, and it is therefore very regrettable that they do not appear to have been consulted by the authors of *Housing Manual.*

As the special problems of flat construction are being studied by the Burt Committee, and as sound insulation is one of the biggest problems involved, it is to be hoped that the BRS will be responsible for this section of the report, which would form an excellent follow-up to their *Sound Transmission in Buildings*, and they may now be in a position to advise on other and less expensive alternatives to the fully discontinuous construction, which, although very desirable, may prove to be too expensive for flats for lower income groups.

In paragraph 28 of Appendix 8, an improvement of only 5 phons is expected between the lower and upper flats in a 2-storey block, although *House Construction* recommends 15 phons in the case of concrete floors and 20 phons in the case of timber floors.

Why this reduction in insulation? Are the occupants of 2-storey blocks of flats less noisy than those in 5-storey blocks?

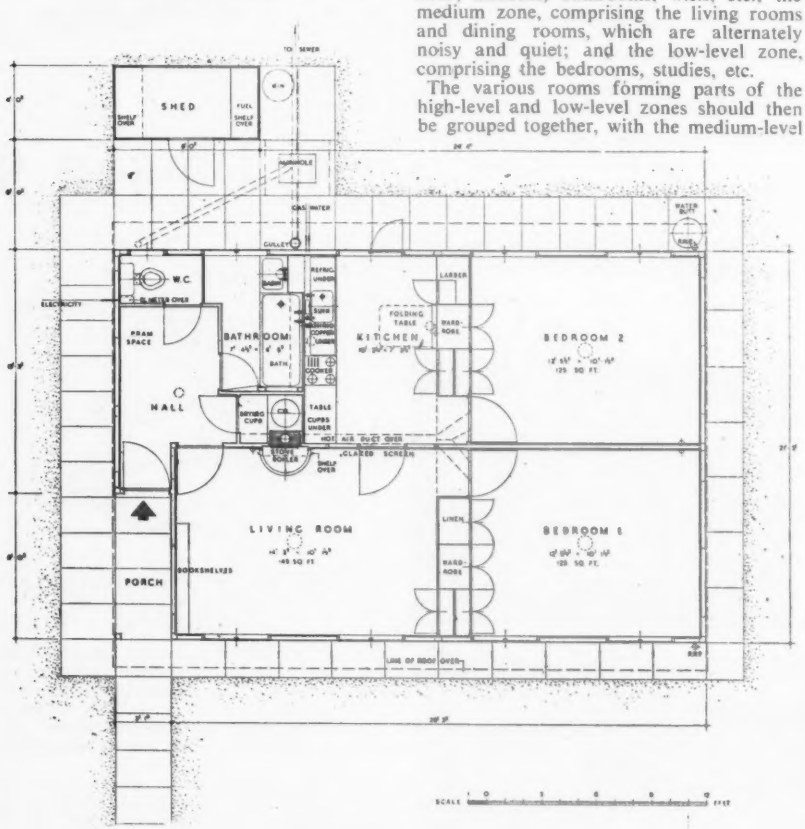
The references to maisonettes in paragraph 91 are also unsatisfactory as, generally speaking, these are only suitable if occupying the two top floors of a block of flats.

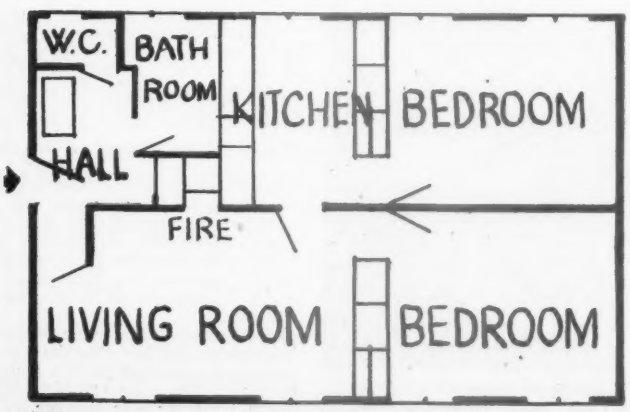
If maisonettes are placed one above the other as is apparently envisaged, the high-level noise zones of the upper maisonette will come immediately above the bedroom floor of the lower maisonette, to the great discomfort of the occupants of the latter. The only solution in this case, and one which is not particularly desirable, is to have the bedrooms of the upper maisonette on the 3rd floor with the living rooms, etc., on the 4th floor. As to placing maisonettes between flats, this is open to even stronger objection.

In the house plans, the same problems do not arise, but there the highly undesirable and much to be condemned feature of having the w.c. over the dining space is shown in Fig. 67 (where it apparently comes immediately over the dining table!) and in Fig. 73.

In an official publication bearing the *imprimatur* of MOH and MOW it is very regrettable that such defects should be found, especially as it will be read by many people who have not technical knowledge and who will quite likely take all the statements and plans as being correct because they are official.

London STIRLING MALLOCH





The Churchill House. Top, amended plan of the Ministry of Works. Bottom, suggested plan by A. G. R. Mackenzie.

The Churchill House

SIR,—I hesitate to add to your collection of suggestions for amending the Portal House, but it would make it more suitable for the North of Scotland if space for comfortable seats at the living room fire were provided instead of protection from the sun at the front door.

Aberdeen A. G. R. MACKENZIE

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HEAT ABSORBING GLASS: ·CALOREX·

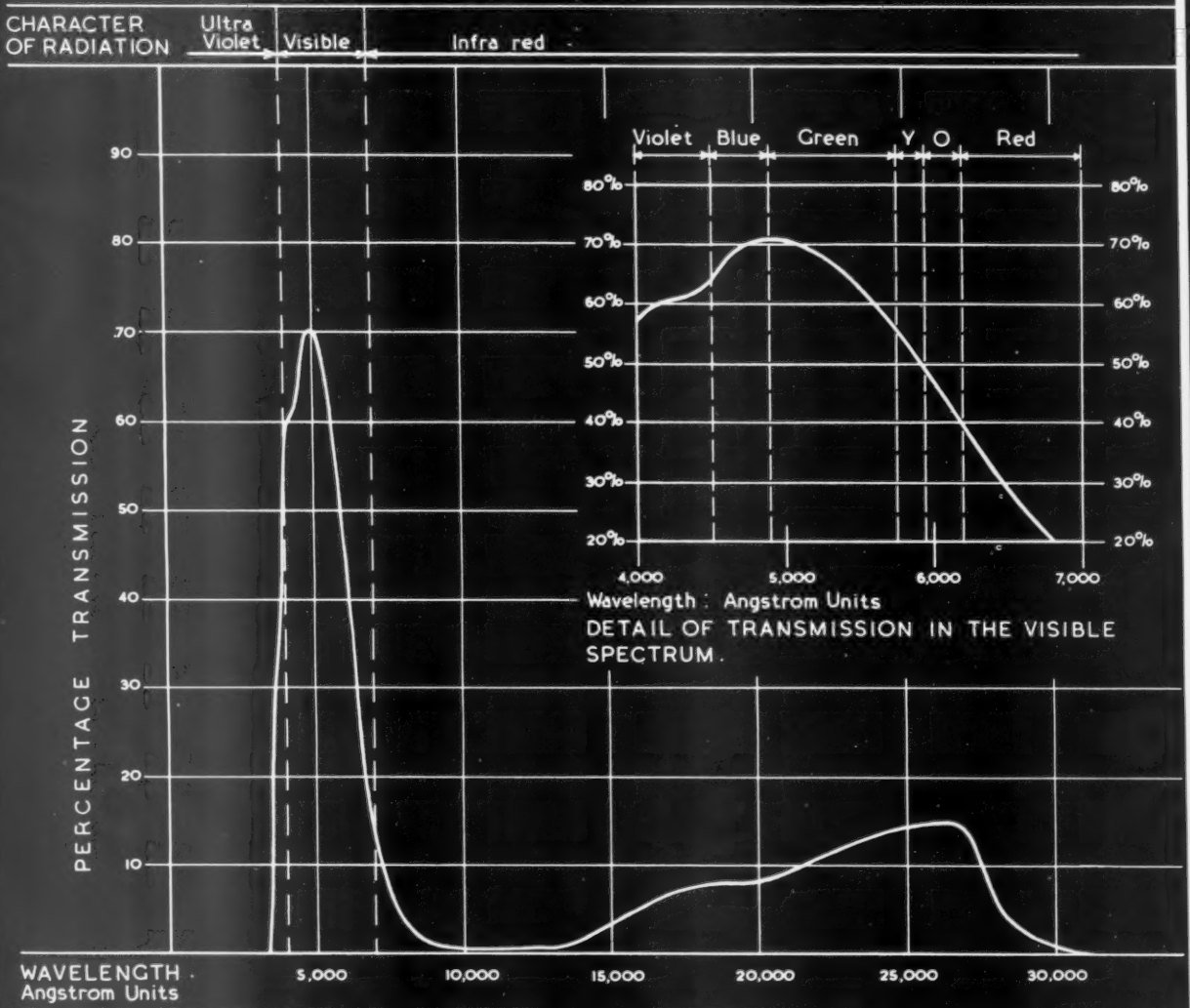
CHARACTERISTICS FOR SOLAR RADIATION *	LIGHT	HEAT
TRANSMISSION %	60	22
ABSORPTION %	33	73
REFLECTION %	7	5

* As defined in Transactions of the Illuminating Engineering Society of America, Nov. 1941.

CHARACTERISTICS FOR RADIATION FROM ARTIFICIAL LIGHT SOURCES *	LIGHT	HEAT
TRANSMISSION %	55	10
ABSORPTION %	38	85
REFLECTION %	7	5

* Typical gas-filled electric lamp 2848°K colour temperature

PERCENTAGE TRANSMISSION AT VARIOUS WAVELENGTHS: SOLAR RADIATION.
The graph below indicates the percentage transmission of radiant energy through Calorex glass at various wavelengths. The figures refer to Calorex of any nominal thickness, as the concentration of th absorbing media is adjusted inversely to the nominal thickness of the glass.



Information from Chance Brothers Ltd.

INFORMATION SHEET: GLASS 17: TYPES OF GLASS 9.
Sir John Burnet Tait and Lorne Architects One Montague Place Bedford Square London W C I.

943

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 949 •

GLASS: No. 17

Subject : Calorex Heat-absorbing Glass.

General :

This Sheet is the seventeenth of the series dealing with glass and glass products and the ninth of the section on types of glass.

Standard Forms, Sizes and Thicknesses :

Calorex is available in the form of blown sheet, polished plate, and rolled plate. The standard sizes and thicknesses are :

Form	Maximum sizes	Thicknesses
Sheet	50 by 36 in.	21oz., 26 oz., 32 oz.
Polished plate ...	60 by 36 in.	$\frac{3}{16}$ in., $\frac{1}{4}$ in.
Toughened polished plate	36 by 24 in.	$\frac{3}{16}$ in., $\frac{1}{4}$ in.
Rolled plate	100 by 40 in.	$\frac{1}{4}$ in.
	90 by 36 in.	$\frac{3}{16}$ in.
	60 by 36 in. and 84 by 24 in.	$\frac{1}{4}$ in.

General Properties :

Calorex has a pale greenish tint, and the property of absorbing radiant heat (infra-red radiation) without undue absorption of light. The compositions are so adjusted that the absorptive properties are not dependent on the nominal thickness.

From the tables on the face of this Sheet it will be seen that the total light transmission of Calorex for solar radiation is 60%.

The illumination in a room glazed with Calorex is therefore about 2/3rds of that with clear sheet glass. The greenish tint is noticeable when first entering such a room, but is rapidly forgotten. If Calorex is used in south and west aspects and not north or east, the colour effect is less noticeable. The standard properties for artificial light and heat for an electric lamp at 2,848° K colour temperature are : light transmission, 55% ; heat transmission, 10%.

Calorex is therefore an excellent filter for obtaining artificial light free from excessive radiant heat, as is required in projector lanterns, operating theatre lights, microscope lamps, and so on.

The efficiency of Calorex is due to the strong absorption of the infra-red region without undue absorption in the visible region of the spectrum. This is shown in the diagram on the face of this Sheet, in which the transmission factor is plotted on the spectrum wavelength. It will be seen that there is also strong absorption of ultra-violet radiation, which is largely responsible for the fading of fabrics, etc.

Heat Excluding Glazing : Importance of Ventilation :

When sunlight falls on Calorex, the radiant energy in the infra-red region is absorbed and the glass itself gets hot. This heat is largely dissipated outwards, owing to the freer movement of the outside air, but some heat is dissipated inwards and serves to increase the temperature of the air adjacent to the glass. If this air is drawn away by natural or forced ventilation, the greater part of the heat from the sun is prevented from reaching the main body of the room.

The importance of ventilation will be seen from the following figures, which indicate the relative heating effects in a room glazed with Calorex and with ordinary white glass ; following the formulæ already given in Sheet 8. Careful design can dissipate the heated air near a window without it becoming distributed in the room.

Properties of the Glasses for radiant heat from the sun :

	Ordinary Glass.	Calorex.
Heat transmission factor	0·80	0·22
Heat absorption factor	0·12	0·73
Heat reflection factor	0·08	0·05

Transmission of Radiant Heat, relative to an unglazed window :

	Ordinary Glass.	Calorex.
Single glazing :		
Without ventilation ...	83%	40%
With ventilation ...	80%	22%
Double glazing. (Inner component of ordinary glass in all cases) :		
Without ventilation ...	71%	23%
With ventilation ...	64%	17%

Position of Calorex in Double Glazing :

It is essential that Double-glazed Calorex should have the Calorex as the outer component of the window. Otherwise the heat dissipated in the glass is confined by the cavity, and transmitted inwards by conduction.

Reduction of Temperature of direct Sunlight :

The main source of discomfort in a room with a south aspect is the increase of floor temperature in direct sunlight. If the sun temperature is taken as 130° F., and the shade temperature as 80° F., the following may be calculated for the temperature in direct sunlight within a room :

Open window	130° F.
Ordinary glass	120° F.
Calorex glass	91° F.
Double glazed (Calorex glass outside, sheet inside)	89° F.
Shade temperature	80° F.

Practical measurements have confirmed the accuracy of these figures, and it will be seen that whereas ordinary glass offers virtually no protection against the sun's heat, Calorex reduces the direct sun temperature almost to shade temperature. It is therefore possible to work in a room with a high daylight factor and a south aspect without discomfort.

Conduction :

Heat transfer by conduction through Calorex is not reduced to the same extent as the heat transfer by radiation, when compared with ordinary glass. The coefficient of heat transmission through a single- or double-glazed Calorex window is the same as that for ordinary glass. (See Sheet 7 of this series.)

Previous Sheets :

Previous Sheets of this series on glass are Nos. 914, 917, 919, 922, 925, 927, 929, 932, 937, 938, 940, 945, 946, 947 and 948.

Issued by : Chance Brothers Limited
Address : Glass Works, Smethwick, 40, Birmingham
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Telegrams : Chance, Smethwick

PHYSICAL PLANNING SUPPLEMENT

On the right is a view of Vauxhall Gardens in 1751. A reminder that London was not always the same cheerless expanse we know today, starved of green spaces and presenting mainly an expensive and glittering facade to the citizen in search of an evening's entertainment. Eighteenth century London could boast fashionable resorts of which Vauxhall was one. But, in addition there were numerous smaller gardens, some founded upon the fame of their mineral springs (precursors of the modern health centre), and others connected with tea-drinking and similar sports. In the following article Dr. Phillips lists some of those public buildings and social amenities of today, connected with activities which are, or should be, essentially social. He makes a plea that they should be planned both for convenience and comeliness—that planners should not forget pleasure.

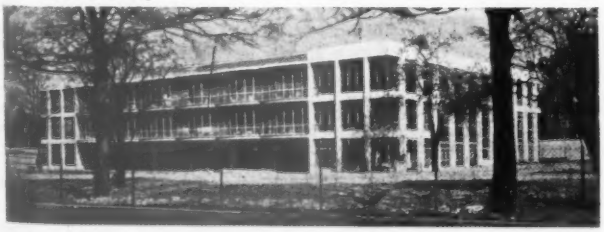
PLANNING PUBLIC PLACES

by Hugh Stowell Phillips

An increasing part of the social life of the inhabitants of towns is necessarily co-operative. Unless citizens do co-operate, municipally, regionally, and even nationally, to provide themselves with rate or tax supported services, they get either no services or expensive monopoly services. So many buildings in the modern town house activities which are essentially social, that the planning of these public buildings alone will do much to clear up our large towns. In this short article an attempt is made to outline a few of the most desirable developments in this by no means minor sphere of local planning.

the civic group

Below is the Pioneer Health Centre at Peckham . . . "a focal point at which the town as a workshop coincides with the town as a community."



Far too much attention has been paid, in the municipal planning of the inter-war years, to the creation of spectacular town halls. Far too little attention has been paid to the proper location of these buildings, and to the creation of amenities within them which would make them more than the "offices of the local bureaucracy." Quite apart from the need for such buildings to become the centres of local political life in the form of meetings, and socials, they need to be planned in definite relation to equally important buildings such as the Civic Library and Health Centre.

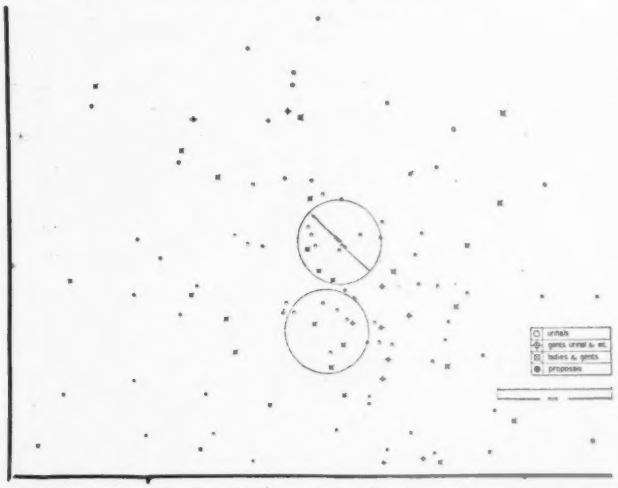
Provided the dangers of over-centralization of municipal amenities are avoided, there are many reasons why central facilities, embodied in the Library, Health Centre, Town Hall and so on, should be planned in close relationship. Quite apart from functional reasons which can be advanced for linking the idea of using a library with the idea of using a health clinic, there is distinct municipal pride to be expected where there is a fine and useful Civic Centre. Like every other local enterprise the Civic Centre idea can become a narrow local "ours is the biggest" sort of mind-narrowing influence, but this is no argument against a Civic Centre. It is merely an argument against the nature and form of Local Government Areas as now run and constituted. In by far the greater number of our towns to-day, there is still no local tradition of the provision of health clinics in all areas, and where such clinics exist, nobody seems really concerned with building up their reputation. Their location and lay-out is frequently inefficient.

In regard to this question of Health Clinics, it cannot be too much stressed that they must be placed in relation to the residential location of their expected users, and not at "prestige" sites. The general experience of local authorities, hospitals and private practitioners, as also backed up by the findings of the Peckham Experiment, is that a real health centre, which aims at providing a balanced "health-creating" no less than "illness-curing" atmosphere, must cater for not less than about 7,500 persons. Only such a number can support the expensive equipment and considerable costs involved. It was at Peckham that they were forced to the conclusion that 1,000 families do not provide enough social variety to achieve the purposes of the health centre.

It can wisely be argued, however, that a large scale club, where members agree to periodical inspections, is probably too much like an institution to succeed. True it is that nobody should have to walk more than ¼ a mile to a clinic, but they may wish to go there purely for one reason, and may resent an artificially created self-conscious atmosphere. For these and other reasons, it seems important to insist, primarily, that essentials be provided first on a small scale, and that larger institutional efforts follow. Smaller single purpose clinics and facilities, such as mother and child clinics, dental centres, child creches, gymnasiums, can be run as self-supporting municipally assisted units. The time will come, we cannot but hope, when each residential unit will have all that it needs

in this way, and it may well be a greater economy that all such facilities should be housed together in relation to each other, but this should not make it necessary to give them a self-conscious unity, along institutional lines.

the public convenience



Above is a map showing all the existing and proposed Conveniences in a County Borough in England, in an area within about three miles of the centre. The two circles represent the two main centres of the town. It will be seen that there are only six "combined" Conveniences in these two areas, each with a radius of over one-third of a mile. There are also a number of Gentlemen's Urinals, one joint Gentlemen's Urinal and W.C. Convenience, and one proposed new Ladies' and Gents combined, which has, it is believed, been approved and built since the author obtained this map. The central area of a town is, of course, well served with business premises, themselves possessed of very complete amenities. There also exist fully adequate institutional and hotel conveniences, but the fact still remains that the buses terminating their runs at these centres disgorge many thousands of passengers hourly, who must make a considerable potential demand. It is interesting to know how many persons, apart from people who walk in the central areas, are passing through it on bus journeys. In the County Borough considered there are about 500,000 journeys travelled per day on the City and County Services. It is perhaps a conservative estimate to say that 100,000 persons daily cross the central areas of the city, coming from or going to buses alone. When it is realised that only 1,200 males and 1,800 females utilize the six central w.c. conveniences, it can clearly be seen that something is discouraging the use of these amenities. The discouragements are numerous and it is not the place, here, to discuss them, but suffice it to say that a well planned, well designed series of conveniences, can be supported under conditions where the objections do not exist. The City Engineer of the County Borough is aiming at covering the city very thoroughly with combined Conveniences. There is reason to believe, moreover, that the existing facilities are *better* than those in most other County Boroughs and Metropolitan Boroughs.

Little attention has been paid to the location and design of public conveniences. How many towns can say that "wash and brush up" facilities exist in the public conveniences? How many have more than one central convenience? Many more of these types of local facility need to be provided, and it is folly that such an eminently self-supporting service should have been neglected so badly.

It is desirable that there should be a Public Convenience, for both sexes, within walking distance of any residential area cum shopping centre. In most of such areas nothing elaborate is wanted or desired. The main consideration in such areas is a pleasant retiring design, and above all a location least likely to displease. Opposition from houses anywhere near a proposed convenience has been found by local authorities to be tremendously strong. So much so that one local authority known to the writer was only able to construct two out of ten proposed conveniences in 5 years, starting the others but being unable to complete as result of opposition. This fact alone is an argument for building the convenience as an integral part of the area to begin with, *i.e.*, planning for one, rather than trying to graft it on to an historical creation. Where it is grafted on, however, in reply to a need, no weakness should be shown to purely isolated objections.

More than 60 per cent. of the demand for conveniences is found in the central areas of large towns, more or less according as there is or is not a large centripetal and centrifugal movement daily. In an average large town only one or two of the Public Conveniences are self-supporting; most of them are very expensive. Moreover, statistics show that they are used far less than would be expected, especially by women. It has been suggested that there are commercial reasons for this, but the author doubts it. Far more Public Conveniences could become self-supporting, if the narrow approach to their function was dropped. The few hundred pounds that might be lost in one direction could be gained in others, if the subsidiary "wash and brush up" facilities were modernized, "make-up" rooms provided, "rest rooms" also possibly added. A Public Convenience can be a perfectly sightly, sanitary and visited place. At certain strategic sites, as at Bus Termini, they will repay development.

the swimming pool

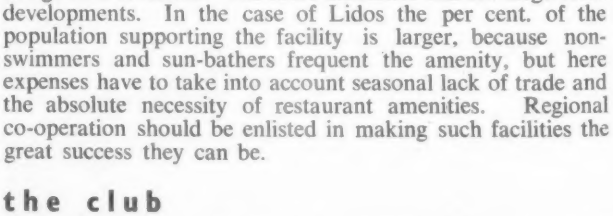
Below is Wembley swimming pool. Although it is the world's largest covered bath, its buffets, bars and accommodation for spectators present an excellent example of what should be provided, along with a swimming bath, in every town.

Swimming baths and skating rinks, it is true, can only be afforded by the larger localities, but too few of these larger towns are making full use of the health and recreational possibilities of lidos, swimming pools, and so forth.

The population required to support a good INDOOR swimming bath is not smaller than 50,000, of which number not above 10 per cent. can be expected to make use of the bath at any time under present circumstances. In general, baths with good social and restaurant amenities attached, and a good keen coaching staff, are the ones whose popularity brings in a dividend. All these amenities call for large scale developments. In the case of Lidos the per cent. of the population supporting the facility is larger, because non-swimmers and sun-bathers frequent the amenity, but here expenses have to take into account seasonal lack of trade and the absolute necessity of restaurant amenities. Regional co-operation should be enlisted in making such facilities the great success they can be.

the club

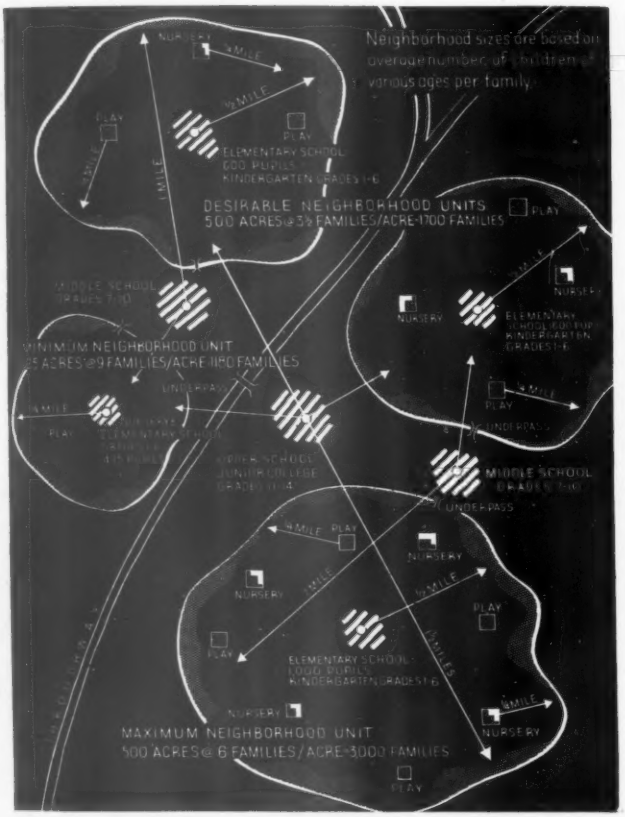
Below is Impington Village College, one of the four experimental village colleges built by the Cambridgeshire Education Committee. In 1942, between 1,200 and 1,400 persons, ranging in age from fourteen to over seventy, out of a total of 7,500 in the region, attended the college each week for social and educational activities.



Adult Institutes are urgently required to take the place now very often only provided by private clubs, working men's institutes, and Mechanic's Institutes. Why should a chess player, to take only one example, have to join the Mechanics

Institution, as in Nottingham, if he wishes to get a good game of chess with the best players? Why should public debates be so rare, and the intermixture of adults and adolescents so small, when well planned and located Institutes would fill the gap?

the school



The best education is the result of a well-conceived neighbourhood plan in which the school has been created as an integral part of the daily life of all the people who live in the community. The diagram above, which illustrated an article on the school-neighbourhood nucleus by N. L. Engelhardt, in the Architectural Forum, October, 1943, shows the distribution of different-grade schools among neighbourhood units. Although the data is derived from American statistics, the application of the principle is of common interest.

In very few towns are the schools planned. Not only do they fail to become adequate units in which children can grow up fully, with large rooms, well planned access and egress and proper sanitary facilities, but they are sometimes more slummy than the homes the children come from. These schools, moreover, are frequently located quite without reference to their functions as the centre of the social life of residential units or neighbourhoods.

It has been shown that the natural area of influence of elementary schools should be that covered by a child's walking distance from the school. This will involve different numbers of children according to whether the area is densely or loosely developed. In all cases, however, it is unlikely that even in areas where families are dominant, the elementary school thus located would have to cater for above 500. Considerable evidence exists to show that in a modern building about 300 children is the optimum size for a single unit, but that two such units working in unison can cater for 500. The area supporting a secondary school will greatly shrink now that such education is to become less of a private monopoly, and accordingly it will tend more and more to become the function of an easy bus distance or cycle ride from the average home. The size at which the secondary school reaches an optimum cannot safely be put much below 750, in view of the very extensive equipment now installed in laboratories which need to be used constantly. Schools catering for 1,000 schoolboys and girls should prove perfectly efficient if an architect has planned them to avoid congestion, and if meals and classes are all planned and timed in a proper manner.

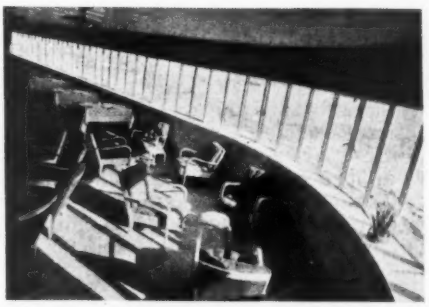
the restaurant

Right is a British Restaurant, with a mural by John Piper.

Municipal restaurants are here to stay, but they are very badly run in most towns. To start with, if we are to make them the useful services they aim to be, we will have to build special premises for them, after the war. Secondly, they will need to be planned as units just as efficiently as Lyons plan their cafés, so that they become both popular and profitable.

the aerodrome

Right is the Lounge and Restaurant of the London Gliding Club. The continuous 90-ft. window commands the soaring slopes, landing ground and the concrete apron immediately in front of the hangar where the machines are rigged.



In many towns it is impossible to walk comfortably from one's home into good open country. In order to achieve this, it is essential, in large towns (+ 5 miles radius), to develop wedges of open space driven spearwise from the periphery to the centre. In growing towns the land required to make a future wedge should be preserved now.*

The great cost of preserving wedges of land from the centre of the city, widening to the periphery, emphasizes all the more the necessity of planning open space amenities in the endeavour to make them as self-supporting as possible. As I have argued elsewhere (†), the Municipal Airport can be located in this wedge of open space. The attraction capacity of a modern airport can be made good use of, and need in no way detract from the full value of the wedge of open space as such. Fee paying visitors to the aerodrome can become, as at Amsterdam, a source of revenue, obtained from seeing aircraft, riding in them, having meals and dancing. As will be appreciated, an airport is also very well illuminated at night, which adds to its value as a visual attraction. Aeroplanes will not bore children and young persons, or alert minded adults, for a long time yet.

the park

Whilst the object of the open space and tree land, embodied in the wedge should primarily be the provision of FREE,

* The classical description of how such a wedge can be built up is found in G. Boumphrey's *Town and Country Tomorrow*.
It is clear that in a town already large and highly built up, the process of expanding the wedge is dependent upon the speed with which buildings and estates which are scattered on it can be replaced by others elsewhere. The area chosen for development as a wedge will naturally be that as little developed as possible. Once chosen, however, the current buildings, except in rare cases, will be condemned to ultimate removal.
In the case of a growing large town the position is simple, as it depends on negative zoning against future building, rather than any removal

† Town Planning and Post-War Air Transport. *Aircraft Engineering*, April, 1944.

quiet and natural surroundings, for walking and courting, the provision of boating lakes, lidos, tennis courts, golf courses, bowling greens, cycle tracks and games grounds, all dove-tail into the grand objective, as well as help to pay for it. They would occupy only a fraction of the whole wedge in a large town.

the crematorium

Below, the Crematorium on the forest cemetery of Enskede, Stockholm, by S. Lewerentz and G. Asplund.

The list might go on almost without ending, but special reference should be made to the need for the development of Regional Crematoria in the large towns. There is a gradual realization of the natural, cleanly and unwasteful nature of this form of burial, and it will be increased all the faster as pleasant, well conceived Crematoria attached to beautiful gardens, as at Golders Green, are provided by the municipality.

conclusion

The planning of all these amenities and buildings illustrates the need for three things at present absent from municipal, or regional planning.

First, there is need for national legislation making the co-ordination of all planning and development a matter of course, as well as bringing land utilization and ownership into the hands of one central authority. In conjection with this need goes the general need for more local powers, enabling such projects as municipal theatres and factory estates to become practicable, and also making compensation a secondary matter in the hands of the planners.

Secondly, there is great advantage in the co-operation of sociologists and architects, who should both be brought in and fully utilized in all development schemes. Alongside the greater use of specialists in the question of effective social planning goes the need for more popular control over the government of municipal amenities.

Thirdly, there exists a great need for imagination and boldness amongst local authorities and councillors. They must come to realize that the most expensive scheme and the best planned is often the cheapest and most profitable in the long run. Payment will, however, need to be based on national long term loans and not on local rates. Regional finance, assisted by national loans, is the solution, and the burden will have to be borne by those who can best afford it.

PUBLIC BUILDINGS AND SOCIAL AMENITIES.

1. National Administrative Offices.
2. Town Hall and Offices.
3. Law Courts.
4. Post Offices (Central).
5. Post Offices (Branch).
6. Museums
7. Central Libraries.
8. Branch Libraries.
9. Swimming Baths.
10. Schools.
11. Technical Colleges.
12. Universities.
13. Power Stations.
14. Water Supply Buildings.
15. Reservoirs.
16. Markets (Wholesale).
17. Markets (Retail)
18. Municipal Restaurants.
19. Car Parks.
20. Barracks.
21. Parks.
22. Botanical and other Gardens. Zoos.
23. Tennis Courts and Bowling Greens.
24. Bus Stations (and Garages).
25. Railway Stations.
26. Lidos.
27. Skating Rinks cum Dance Halls.
28. Abattoirs.
29. Sewage Disposal Works.
30. Sewage Farms.
31. Public Conveniences.
32. Washhouses and Municipal Laundries.
33. Woodland and Natural Open Space.
34. Boating Lakes and Golf Courses.
35. Health Centres.
36. Clinics.
37. Creches.
38. Airports.
39. Airport Amenities.
40. Adult Institutes.
41. Crematoria.
42. Municipal Dairies.
43. Municipal Factories (Ests.)
44. Cycle Racing Tracks.
45. Parkway Tree Strips.
46. Municipal Theatres.
47. Children's Theatres.
48. Municipal Hostels.
49. Refuse Disposal Plants.

KEY.

1 to 23.—Where these exist they are often planned, but location is often very bad, and the planning often quite unsuitable.
24 to 34.—These are very rarely planned, and where they exist are often also privately controlled.
35 to 49.—These hardly exist yet, or are privately controlled. They need special development.

PLANNER'S SCRAPBOOK

SHARAWAGGI AT LINCOLN?

The proposal to erect two 230-ft. cooling towers as part of the Lincoln Corporation's electricity power station has resulted in an inquiry before Sir Cyril Hurcomb, Chairman of the Electricity Commissioners, Sir Leonard Pearce, a fellow commissioner, and Mr. G. L. Pepler, of MOTCP. Models and photographic evidence were submitted. Mr. E. J. C. Neep, for the corporation, declared that only in one place could the towers interfere with the view of the cathedral, but Mr. G. A. Jellicoe, President of the Institute of Landscape Architects, giving evidence on the second day, described the towers as "colossal structures, which would be like carbuncles on a man's face."

If an alternative site cannot be found, this dilemma (similar to that at Durham. See Planner's Scrapbook, A.J., 24.8.44) might be solved by the subtle art of Sharawaggi; if neither is possible then a deliberate choice will have to be made between the existing *genus loci* of Lincoln and the city's aim to attract new light industries after the war.

BEACHCOMBER'S PLAN NEWS

"The twelfth and latest Strabismus Plan for the reconstruction of London and the killing of the giant Beauty has the advantages of complete simplicity coupled with bold thinking. Briefly, the basis of the Plan is somewhat as follows. By tearing down Fleet Street, the Strand, Ludgate Hill, Cheapside, Blackfriars, Queen Victoria Street and most of the City, it is hoped to obtain a Vista. From Trafalgar Square there would be an uninterrupted view of the proposed Power House next to St. Paul's Cathedral. By a diversion of the railways, passengers in trains could also see the Power House as they pass, as in the case of Durham and Lincoln. And by diverting the Thames to Golders Green, stately barges could ply between this Power House and the nexus of radio towers and battlements at Swiss Cottage.

the vista

In the search for new effects Dr. Strabismus (Whom God Preserve) of Utrecht would even be willing to clear away all London between Earl's Court and Barking, to make room for four mile-wide motor-roads, intersecting in a circular manner and in such a way as to by-pass each other frequently. Or, alternatively, by completely clearing away London between Hammersmith and Forest Hill, Highgate and Croydon, we could obtain one enormous Vista in every direction. We are not living in the Middle Ages."—(Beachcomber in the *Daily Express*.)

PLANNER'S QUIZ

THE ANSWER TO THE LAST PROBLEM

4. Beaumont-en-Pericord, France—13th century—typical "Bastide" walled town built during the Hundred Years War to assemble together and protect the scattered peasantry in order that they might continue to live and produce food for the warring armies. Large numbers of these small fortified towns were rapidly built—each centring on the produce market. They were found to be sound financial investments, and were laid out for military convenience to a simple chess-board pattern.

Can you place this town pattern? Its historical background, the form of social organization underlying it, the town planning approach employed, the locality?

Answer in the next Planner's Scrapbook.

PRICES

EIGHTEENTH WARTIME LIST

Rates of Wages have not risen since April 2, 1943, and are now as follows :—

LONDON DISTRICT	*Craftsmen.*	*Labourers.*
Within 12 miles radius	2s. 1½d.	1s. 8d.
From 12-15 „ „	2s. 1d.	1s. 7¾d.

GRADE. CLASSIFICATIONS

	A	A¹	A²	A³	B	B¹	B²	B³	C
Craftsmen ..	2s. 0d.	1s. 11½d.	1s. 11d.	1s. 10½d.	1s. 10d.	1s. 9½d.	1s. 9d.	1s. 8½d.	1s. 8d.
Labourers ..	1s. 7d.	1s. 6½d.	1s. 6¼d.	1s. 5¾d.	1s. 5½d.	1s. 5d.	1s. 4¾d.	1s. 4¼d.	1s. 4d.

CURRENT MARKET PRICES OF MATERIALS

BY DAVIS, BELFIELD AND EVEREST,

Chartered Quantity Surveyors.

Prices vary according to quality and the quantity ordered.

Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profit for the General Contractor.

CONCRETOR

Cements

† All delivered in paper bags (20 to the ton) free.
* Paper bags charged at 7/– extra per ton; jute sacks charged at 35/6 per ton and credited on return at 1/6 each, when received in good condition within two weeks.

		6 Tons and over	In 80-ton freights F.A.S. Safe Wharf In River Thames, London Area.
*Portland	per ton	51/–	48/6
*"417" Ultra rapid hardening	per ton	71/–	—
*Rapid hardening ..	per ton	57/–	54/6
*Water repellent ..	per ton	81/–	—
Atlas White (1 barrel 376 lb.)			per barrel — 6 ton upwards
*Colorcrete rapid hardening, buff and red		per ton	91/–
*Colorcrete rapid hardening khaki ..		per ton	91/–
†Colorcrete rapid hardening dark ..		per ton	—
†Colorcrete non-rapid hardening ..	per ton from		175/– to 399/–
†Snowcrete (paper bags free) ..		per ton	225/–

	1–9 cwts.	10–19 cwts.	1 ton and upwards
*Ciment Fondu, delivered Central London area .. .. per cwt.	15/3	14/9	12/8

Aggregate and Sands (Full Loads)

2" Unscreened ballast	per yard cube	12/–
¾"(Down) Washed, crushed and graded shingle	per yard cube	12/9
¾" (Down) Ditto	per yard cube	13/9
2" Broken brick	per yard cube	14/6
¾" Ditto	per yard cube	16/–
Washed pan breeze	per yard cube	9/6
Coke breeze 1" to dust	per yard cube	—
1/16" Sharp washed sand	per yard cube	14/6
White Silver Sand for white cement (one ton lots)	per yard	40/–

(For Sands for Bricklaying and Plastering *see* respective trades)

Pavings

Brick hardcore	per yard cube	7/6
Concrete ditto	per yard cube	8/6
Clean furnace clinker and boiler ashes	per yard cube	4/–
Coarse gravel for paths	per yard cube	—
Fine ditto	per yard cube	—
Clean granite chippings	per ton	38/2

CONCRETOR—(*continued*)

Pavings—continued

Red quarry tiles, 6" × 6" × ¾"	per yard super	8/1
Ditto 6" × 6" × ⅝"	per yard super	6/9
Buff ditto 6" × 6" × ¾"	per yard super	8/10
Ditto 6" × 6" × ⅝"	per yard super	7/5
Hard red paving bricks, 2"	per 1,000	237/9
Ditto 1½"	per 1,000	215/9

Reinforcement

Home trade maximum basis price for mild steel rods, ⅝" diameter and upwards, ex mills delivered to station or siding	per ton	£16 19 6
Extras for :—		
Under ⅝" to 7/16" diameter	per ton	10/–
Ditto 7/16" and over ⅜" diameter	per ton	15/–
⅜" and over 11/32" diameter	per ton	20/–
11/32" and over 9/32" diameter	per ton	25/–
9/32" and over 5/32" diameter	per ton	30/–
5/32" and over ¼"	per ton	35/–
¼" diameter	per ton	40/–
Under ¼" to 3/16"	per ton	60/–
Lengths over 40 ft. to 45 ft.	per ton	10/–
„ „ 45 ft. to 50 ft.	per ton	15/–
„ „ 50 ft. (as 50 ft. plus per ft.) ..	per ton	1/6

Sundries

Retarding liquid, in 5-gallon drums (for exposing aggregate) per gallon	21/–	Ex Warehouse, Southwark Bridge. Drums chargeable and credited, if returned.
Ditto (for obtaining a bond) per gallon	13/1½	

BRICKLAYER

Common Bricks

†Rough stocks	per 1,000	—
†Third stocks	per 1,000	—
†Mild stocks	per 1,000	—
Sand limes	per 1,000	—
‡Phorpres pressed Flettons	per 1,000	62/3
‡Phorpres keyed Flettons	per 1,000	64/3
Blue Staffordshire wirecuts	per 1,000	295/9
†Lingfield engineering wirecuts	per 1,000	98/–
Firebricks, best Stourbridge 2½"	per 1,000	425/–
Firebricks, best Stourbridge 3"	per 1,000	542/6

Facing and Engineering Bricks

Sand Limes, No. 1	per 1,000	—
Sand Limes, No. 2	per 1,000	—
‡Phorpres rustic Flettons	per 1,000	82/3

‡ At King's Cross (Maiden Lane) Stn. For delivery in W.C. district add 10/– per 1,000.

BRICKLAYER—(*continued*)

Facing and Engineering Bricks—continued.

Midhurst Whites	per 1,000	—
†Hard stocks, firsts	per 1,000	—
†Hard stocks, seconds	per 1,000	—
Sand-faced, hand-made reds	per 1,000 from	195/6
Sand-faced, machine-made reds	per 1,000 from	—
Red rubbers (9¾-in.)	per 1,000	—
Uxbridge Flints (white)	from per 1,000	86/–
Uxbridge Flints (creams, light greys, etc.) per 1,000	from	113/–
Dunbriks (concrete), greys or Commons, ex works	per 1,000	66/–
Dunbriks (concrete), various colours, ex works	per 1,000	—
†Southwater engineering No. 1 (first quality red pressed)	per 1,000	148 –
†Southwater engineering No. 2 (second quality red pressed)	per 1,000	128/–
Blue pressed	per 1,000	323/3

† Price ex works, delivery extra.

Limes and Sand

		1-ton lots	6-ton lots
Lime, greystone	per ton	61/–	—
Lime, chalk	per ton	61/–	—
Lime, blue Lias (including paper bags)	per ton	—	—
Lime, hydrated (including paper bags)	per ton	70/6	—
Washed pit sand	per yard cube		13/6

(For cements, *see* "Concretor.")

Hire of jute sacks charged at 1/6 and credited at 1/6. If left charged at 1/9.

Sundries

Wall ties, self coloured	per cwt.	—
Wall ties, galvanized	per cwt.	—
D.P.C. slates, size 18″ × 9″	per 100	48/6
D.P.C. slates, size 14″ × 9″	per 100	41/6
D.P.C. slates, size 14″ × 4½″	per 100	11/6
‡Ledkore D.P.C. Grade A	per foot super	8½d.
‡Ledkore D.P.C. Grade B	per foot super	10½d.
‡Ledkore D.P.C. Grade C	per foot super	1/–

‡ Trade discount 5 per cent. and cash discount 5 per cent. Prices include delivery on minimum of £5 orders.

Airbricks:	9″ × 3″	9″ × 6″	9″ × 9″	12″ × 9″	14″ × 9″
Red and buff terra cotta	each 1/–	2/1	4/7	—	12-7
Black cast iron, School Board pattern airbricks	9″×3″	9″×6″	9″×9″	12″×6″	12″×9″
per doz.	—	—	—	—	—
Galvanized ditto per doz.	—	—	—	—	—
Black hit and miss cast iron ventilators					
per doz.	—	—	—	—	—
Galvanized ditto per doz.	—	—	—	—	—
Buff terra cotta chimney pots	each 3/8	1′ 6″ 4/4	2′ 0″ 6/4	2′ 6″ 8/4	3′ 6″ 19/–	5′ 0″ 32/5
Fireclay	per ton 71/–			–	

Wall reinforcement supplied in standard rolls containing 25 yards lin.

*2″ wide black japanned	per roll	2/5
*2″ wide galvanized	per roll	—
*2½″ wide black japanned	per roll	3/–
*2½″ wide galvanized	per roll	—

Greater widths pro rata 2½″ price carriage paid on orders of £5. Discounts for quantities.

Partitions, etc.

		2″	2½″	3″	4″
Clinker	per yard super	2/6	3/–	3/6	4/8
Pumice	per yard super	4/11	5/10	—	—
Hollow Block	per yard super	2/10	3/1	3/8	4/2
Plaster	per yard super	5/–	5/8	6/11	7/3
†1″ Wood-wool Slabs	per yard super from				4/2 to 4/10
†2″ Wood-wool Slabs	per yard super from				6/7 to 7/6½
†3″ Wood-wool Slabs	per yard super from				8/6 to 9/8½

† Prices according to quantity ordered. 2½% Cash Discount.

Gas Flue Blocks

		Single Flues.	Double Fues
Straight blocks	each	1/4	2/5
Backing block	per set of 3	3/3	5/8
Cover blocks	each	1/8	3/6
Raking blocks 45°	each	3/2	4/11
Raking blocks 60°	each	2/2	3/5
Offset blocks	each	3/10	5/4
Closer blocks	each	1/4	2/5
Closer flashing blocks	each	1/1	1/10
Straight flashing blocks	each	1/1	1/10
Terminal and cap	per set	7/3	12/3
Middle terminal and cap	per set	6/9	11/6
End terminal and cap	per set	7/–	12/–
Corbel block	each	5/4	10/9
Gathering block	each	—	3/7

DRAINLAYER

Agricultural Pipes

		2″	3″	4″	6″
Pipes in 12″ lengths	per 1,000	77/6	110/–	147/6	285/–

(Delivered in full loads Central London Area.)

Salt Glazed Stoneware Pipes and Fittings

		4″	6″	9″
Pipe (2′ lengths)	each	1/8	2/6	4/6
Bends, ordinary	each	2/6	3/9	6/9
Single Junction, 2′ long	each	3/4	5/–	9/–
Yard Gulley, without grating	each	6/3	6/10½	11/3
Ordinary round or square Grating, painted	each	–/7½	1/3	2/6
Ordinary round or square Grating, galvanized	each	1/0½	2/1	4/4½
Extra for Inlets, horizontal	each	1/6	1/6	1/6
Extra for Inlets, vertical	each	2/3	2/3	2/3
Intercepting Trap with Stanford Stopper	each	17/6	22/6	37/6
Grease and mud interceptor with bucket for removing silt and grease for 6″, 9″ and 12″ drains, with iron grating, painted	each		20/–	
Ditto, with iron grating galvanized	each		21/10½	

The above prices to be varied by the following percentages for the different qualities given. All subject to 2½ per cent. cash discount.

	British Standard	British Standard Tested
Orders for 2 tons and over	Plus 15%	Plus 40%
Orders under 2 tons, 100 pieces upwards	Plus 32½%	Plus 57½%
Orders under 2 tons, less than 100 pieces	Plus 42½%	Plus 67½%

	Best	Seconds
Orders for 2 tons and over	Plus 7½%	Subject to 15% off the price of best quality for all sizes.
Orders under 2 tons, 100 pieces upwards	Plus 25%	
Orders under 2 tons, less than 100 pieces	Plus 35%	

Cast Iron Drain Pipes and Fittings

Socket and Spigot Pipes:—

Weight (per 9 ft.)	Size	9 fts.	6 fts.	4 fts. each	3 fts. each
1 . 1 . 8	4″ per yard	8/3	9/3	14/9	11/2
1 . 1 . 20	4″ per yard	8/7	9/6	15/1	11/6
2 . 0 . 6	6″ per yard	12/9	15/2	24/5	19/6
4 . 0 . 2	9″ per yard	23/1	30/3	52/6	40/–
		2 fts.	18 ins.	12 ins.	9 ins.
1 . 1 . 8	4″ each	9/3	7/10	7/3	6/6
1 . 1 . 20	4″ each	9/5	—	—	—
2 . 0 . 6	6″ each	14/8	—	—	—
4 . 0 . 2	9″ each	—	—	—	—

Tonnage Allowances:—
Orders up to 2 tons nett.
Orders 2 to 4 tons less 2½%.
Orders 4 tons or over less 5%.

		4″	6″	9″
Bends	each	8/2½	17/1	52/9
Single junctions	each	14/6	30/–	91/3
Intercepting traps	each	39/7	66/–	162/3
Gulleys ordinary trapped	each	19/2	—	—
Extra for inlet 4″	each	5/3	—	—
Grease Gulley trap	each	152/6	—	—
H.M.O.W. large socket gulley trap with 9″ gulley top and heavy grating and one back inlet	each	33/3	61/8	—

Channels in Brown Glazed Ware

		4″	6″	9″
Half round straight channels 24″ long	each	1/3	1/10½	3/4½
Half round straight channels 30″ long	each	—	—	4/2¾
Ditto, short lengths	each	1/3	1/10½	—
Half round ordinary channel bends	each	1/10½	2/9¾	5/0¾
Ditto, short	each	1/10½	2/9¾	—
Ditto, long	each	3/9	5/7½	10/1½
Three-quarter round branch bends	each	5/–	7/6	—
		6″×4″	9″×6″	
Half round taper channels 24″ long	each	3/9	6/9	
Half round taper channel bends	each	4/8¼	8/5½	

The above prices are subject to the same discounts as those given for "Best" quality salt glazed stoneware pipes.

Manhole Covers, etc.

		Black	Galvanized
24″ × 18″ single seal for foot traffic. (Weight 0.0.3 in lots of 24)	each	19/3	30/–
24″ × 18″ single seal for light car traffic. (Weight 2 cwts. in lots of 24)	each	49/7	88/2
24″ × 18″ Wood Block pattern. For road traffic. (Weight 3 cwts.)	each	Coated 79/3	

DRAINLAYER—(*continued*)

Manhole Covers, etc.—(*continued*)

		Fine Cast	Galv.
‡Cast iron steps, 13½″ long, 6″ wide, 9″ in wall, approximate weight 5½ lb. each	per dozen	17/4	28/11
‡Galvanized fresh air inlets with cast brass fronts (L.C.C. pattern)	each	4″ 7/7	6″ 31/–

‡ These prices are subject to 7½% advance.

MASON

Yorkstone

Building quality Robin Hood and Woodkirk Blue Stone.

Blocks scrappled, random sizes	per foot cube	6/1
Add for blocks to dimension sizes ..	per foot cube	8d. (each dimension)
Templates with sawn beds, edges rough (up to 4 ft. super and not over 2′ 6″ long)	per foot cube	6/9
Templates with sawn beds, sawn one edge,	per foot cube	8/1½
Templates with sawn beds, sawn two edges,	per foot cube	9/5½
Prices f.o.r. Yorkshire, railway rate to London Station per ton. (Minimum 4-ton loads.)		29/1

Artificial Stone

6″ × 3″ Copings and sills..	per foot run	2/1
6″ × 6″ Copings and sills..	per foot run	3/2
9″ × 3″ Copings and sills..	per foot run	2/6
9″ × 6″ Copings and sills..	per foot run	4/6
12″ × 3″ Copings and sills..	per foot run	3/3
12″ × 6″ Copings and sills..	per foot run	5/2
Cornices according to detail, per foot cube (from)		9/3

SLATER, TILER AND ROOFER

Best Bangor Slates

	£ s. d.
24″ × 12″ .. .. per 1,000 actual	—
20″ × 10″ .. .. per 1,000 actual	—

Prices include for delivery to site in lots of 1,000 and upwards.

Tiles

	£ s. d.
Hand-made sandfaced 10½″ × 6½″ red roofing tiles per 1,000	—
Machine-made sandfaced 10½″ × 6½″ red roofing tiles per 1,000	—
Berkshire rustic pantiles .. .. .. per 1,000	—

Asbestos-cement

6″ corrugated sheets, grey	per yard super	3/5
Standard 3″ corrugated sheets, grey ..	per yard super	3/1½

Slates (*Manufacture temporarily suspended*) :—

* 15¾″ × 7⅞″ grey	per 1,000	£7 6 0
* 15¾″ × 15¾″ diagonal, grey ..	per 1,000	£14 12 0
* 15¾″ × 15¾″ diagonal, russet or brindled	per 1,000	£23 12 6

Pantiles (*Manufacture temporarily suspended*).

* Large russet brown	per 1,000	—

* Prices are for minimum two-ton loads, and are subject to 5% trade discount.

WALLBOARDS, Etc.

¼″ Insulating board..	per yard super	2/8½
⅜″ Building board	per yard super	2/3½
⅛″ Standard hard board	per foot super	-/5⅛
3/16″ Do.	per foot super	-/6½
¼″ Tempered hard board	per foot super	-/6⅝

Laminated Wallboard

1/16″ Thickness (standard) :		
1 bundle up to 2,500 sq. ft.	per foot super	-/2 9/16
2,500 sq. ft. to 5,000 sq. ft.	per foot super	-/2 7/16
5,000 sq. ft. and over	per foot super	-/2 5/16

Asbestos-cement and Asbestos Products

† 5/32″ Semi-compressed flat building sheets, grey	per yard super	1/6½
† 3/16″ Ditto	per yard super	1/7
† ¼″ Ditto	per yard super	2/3½

†Prices are for orders of two tons and over and are subject to 5% trade discount.

¼″ Asbestos wallboard (in sheets 8′ 0″ × 4′ 0″),	per foot super	-/5
5/16″ Ditto	per foot super	-/4
* 5/16″ Asbestos wood (in sheets 8′ 0″ × 4′ 0″)	per yard super	2/6½

* Prices are for orders of 2 tons and over.

The following asbestos prices are for minimum 1-ton lots and are subject to 10 per cent. trade discount :—

Asbestos-cement stipple glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″) ..	per yard super	8/8
Marble glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″)	per yard super	8/8

WALLBOARDS, Etc.—(*continued*)

Asbestos-Cement and Asbestos Products—(*continued*)

		25–75 yards	150–300 yards	Over 600 yards
½″ Asbestos Insulating Board	per foot super	—		
⅜″ Fireproof plaster board	per yard super	2/8½	2/4½	2/0½
¼″ Ditto	per yard super	2/6½	2/2½	1/10½
Joint tape (approx. 250 feet run)	per roll	—	—	1/6
Joint filler	per lb.	—	—	-/4

Sundries

Slaters or sarking felt..	per yard run	-/9
Roofing felt (1-ply bitumen)	per yard sup.	1/–
Bituminous hair felt	per roll	58/–

All rolls 25 yards long by 32″ wide.

Building paper, 50″ wide (B.I. 20)	per yard run	1/1
,, (K. 40)	per yard run	-/5¼

"Cabots" Quilts :—(Ex Works) Twenty roll lots delivered carr. free

Double ply .. per roll	per half roll	—

All rolls 28 yards long by 36″ wide. Special terms for quantities.

Cut steel clasp nails	1″ per cwt.	38/9
,, ,, floor brads	2″ ,,	30/9
Bright oval wire nails..	1″ ,,	43/4
,, ,, ,, ,, ...	4″ ,,	31/3
Galvanized wire staples with slice cut points	1″ × 12 gauge per cwt.	52/–
Scotch glue	per cwt.	—

STEEL AND IRONWORKER

Steelwork

	£ s. d.
Basis price for rolled steel joists sections 5″ × 3″ to 16″ × 6″, in 10 ft. to 50 ft. lengths ex mills	per ton 15 10 6

PLASTERER

Plaster and Cement

		1-ton loads	
Sirapite (coarse)	per ton	91/6	
,, (fine)	per ton	99/6	
Victorite No. 1	per ton	136/–	
,, No. 2 or non-sweat	per ton	119/6	
Thistle (browning)	per ton	91/6	
Thistle (haired)	per ton	—	
Pink plaster	per ton	91/6	
White plaster	per ton	94/6	
Keene's pink	per ton	138/–	
Gypstone	per ton	70/6	ex Works, Kent
Glastone	per ton	73/–	
Paristone (haired)	per ton	70/6	
Snowcrete (Tyrolean Finish) 1 ton lots and upwards		per ton	149/–

Sundries

Sharp washed sand			per yard cube	14/6
Cow hair			per cwt.	64/–
Goat's hair			per cwt.	93/–
Expanded metal lathing, 9′ 0″ × 2′ 0″ ⅜″ mesh × 26 gauge			per sheet	2/9
Wire Slate nails (galvanized) 1¼″ × 15 gauge			per cwt.	62/5
,, ,, ,, (bright wire)	,,	,,	per cwt.	—
		25–150 yards	150–300 yards	Over 600 yards
⅜″ Plaster board (plaster base)	per yard super	2/3½	1/11½	1/9½
1¼″ Galvanized nails ..	per cwt.	58/3		
Scrim cloth in 100-yard rolls	per roll	3/10		

Wall Tiles

The following prices are subject to 75 per cent. addition :

Commercial quality.		
Ivory, white, etc., glazed 6″ × 6″ × ⅜″ ..	per yard super	10/1
Angle beads (1½″ wide)	per yard run	1/2⅜
,, ,, (1″ ,,)	per yard run	-/10
Rounded edge tiles	per yard run	2/6½
Coloured enamelled bright glazed, 6″ × 6″ × ⅜″	per yard super	14/3
Angle beads (1½″ wide)	per yard run	1/4¾
,, ,, (1″ ,,)	per yard run	-/11¼
Rounded edge tiles	per yard run	2/7
Eggshell gloss enamelled, 6″ × 6″ × ⅜″ ..	per yard super	15/–
Angle beads (1½″ wide)	per yard run	1/7½
,, ,, (1″ ,,)	per yard run	1/0⅜
Rounded edge tiles	per yard run	2/8¼
Special rates for quantities		

PLUMBER

Lead

3½ lb. and upwards milled sheet lead in quantities of 5 cwts. and upwards	per cwt.	40/-
Add if cut to sizes	per cwt.	3/-
Lead ternary alloy, No. 2 quality extra over sheet lead	per cwt.	14/-
Allowance for old lead delivered to merchant ..	per cwt.	18/-

Cast Iron Goods

	Percentage Adjustment on List No. 3100 A.B. 1/2/40
Rainwater Goods (painted or unpainted) ..	*Plus* 25%
Soil goods (coated or uncoated)	*Plus* 25%

Mild Steel Rainwater Goods

The following prices are subject to 2½ per cent. trade discount and 40 per cent. advance.

24 gauge rainwater slip jointed pipes.	2″	2½″	3	3½″	4″
Galvanized round pipes with ears .. .. per 6′ 0″	2/7½	3/1½	3/9	4/3	4/9
Painted round pipes with ears per 6′ 0″	2/4½	2/9	3/1½	3/7½	4/-
Painted or galvanized short lengths with ears, extra each	-/6	-/6	-/6	-/6	-/6
18 Gauge gutters.	3″	3½″	4″	4½″	5″	6″
Galvanized half round gutters per 6′ 0″	2/-	2/3	2/4½	2/9	3/-	3/7½
Painted half round gutters .. per 6′ 0″	1/6	1/9	2/-	2/3	2/6	3/-
Painted or galvanized short lengths extra each	-/3	-/3	-/3	-/3	-/3	-/3

Asbestos-Cement Rainwater Goods

The following prices are subject to 12½ per cent. trade discount. Orders over £30 are subject to 17½ per cent. trade discount.

Rainwater Pipes.

Prices are for 6′ 0″ lengths, 10′ 0″ lengths available in 2½″, 3″, 3½″ and 4″ diameters. 4′ 0″ charged as 1½ yards. From 4′ 0″ to 6′ 0″ charged as 2 yards. Over 6′ 0″ charged as 10′ 0″.

Round pipes

2″ .. .. per yard run	2/3½
2½″ .. .. per yard run	2/6½
3″ .. .. per yard run	3/1
3½″ .. .. per yard run	3/7½
4″ .. .. per yard run	4/2½
4½″ .. .. per yard run	6/-½
5″ .. .. per yard run	7/1½
6″ .. .. per yard run	8/10½

Gutters.

Short lengths of gutter up to 2′ 0″ charged as 1 yard; from 2′ 0″ to 4′ 0″ as 1½ yards, and over 4′ 0″ as 2 yards.

Half round gutters	3″	4″	4½″	5″	6″	8″
per yard run	1/7½	1/11½	2/-½	2/4½	3/3½	4/1
Ogee gutters per yard run	—	2/4½	2/6½	3/1	3/9	4/10½

INTERNAL PLUMBER

Lead pipe in coils, 5 cwts. and upwards ..	per cwt.	40/3
Lead soil pipe	per cwt.	44/3
Add if ribbon marked	per cwt.	-/6
Lead ternary alloy, No. 2 quality extra over lead pipe	per cwt.	14/-
Plumber's solder	per cwt.	155/-
Tinman's solder	per cwt.	210/-

Drawn lead traps with brass screw eye, 6 lb.

	1″	1¼″	1½″	2″
S. trap .. .. .. each	2/9	3/2	3/11	5/8
P. trap .. .. .. each	2/5	2/7	3/3	4/7
Extra for 3″ deep seal .. each	-/8	-/8	-/8	-/8

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc.

Tubes.						
Tubes 2 ft. long and over	¼″	⅜″	1″	1¼″	1½″	2″
per ft.	-/5½	-/6¾	-/9½	1/1	1/4½	1/10
Pieces 12″ to 23½″ long each	1/1	1/5	1/11	2/8	3/4	4/9
Bends .. .. each	-/11	1/2	1/7½	2/7½	3/2	5/2
Fittings.						
Elbows, square each	1/1	1/3	1/6	2/2	2/7	4/3
Elbows, round each	1/2	1/5	1/8	2/4	2/10	4/8
Tees .. .. each	1/3	1/7	1/10	2/6	3/1	5/1
Crosses .. .. each	2/9	3/3	4/1	5/6	6/7	10/6
Sockets, plain .. each	-/4	-/5	-/6	-/8	-/10½	1/3
Sockets, diminished each	-/6	-/7	-/9	1/-	1/4	2/-

INTERNAL PLUMBER—(*continued*)

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc.—(continued)

Flanges .. each	1/-	1/2	1/4	1/9	2/-	2/9
Caps .. .. each	-/5	-/6	-/8	1/-	1/3	2/-
Plugs .. .. each	-/4	-/5	-/6	-/8	-/10	1/3

Fittings and flanges and tubes ordered in long random lengths are subject to the following trade discounts :—

	Tubes	Fittings	Flanges
"Light Weight"	51½%	47½%	28%
"Heavy Weight"	44%	39¾%	15¾%

COPPERSMITH AND ZINC WORKER

Copper

Hot rolled copper sheeting in 1 cwt. lots, all gauges to 24 wire gauge	per lb.	1/1¼
Light gauge copper tube, solid drawn ..	per lb.	1/3¼
Copper tube, solid drawn screwing sizes ..	per lb.	1/2½
Copper wire, 10 and 12 gauge	per lb.	1/2
Copper nails, 1″ and up	per lb.	—

GLAZIER

Sheet Glass cut to size (ordinary glazing quality)

18 oz. clear sheet	per foot super	3¾d.
24 oz. ditto or "R" quality	„ „ „	5d.
26 oz. ditto	„ „ „	6½d.
32 oz. ditto	„ „ „	8½d.
⅛″ figured rolled and cathedral glass (white)	„ „ „	6½d.
⅛″ ditto, approved tints	„ „ „	9½d.

British Polished Plate Glass cut to size

Ordinary ¼″ Substance In Plates not exceeding		Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
2 ft. super ..	per foot super	2/2	2/4	2/10
3 „ ..	per foot super	2/9	3/-	3/9
5 „ ..	per foot super	3/-	3/6	4/3
*45 „ ..	per foot super	3/6	4/-	5/5
*100 „ ..	per foot super	4/6	5/7	7/2

*Plates exceeding 100 ft. super or 160 in. long or 100 in. wide at higher prices.

Special quotations should be obtained for other qualities and thicker substances.

Wired Glass Cut to Sizes

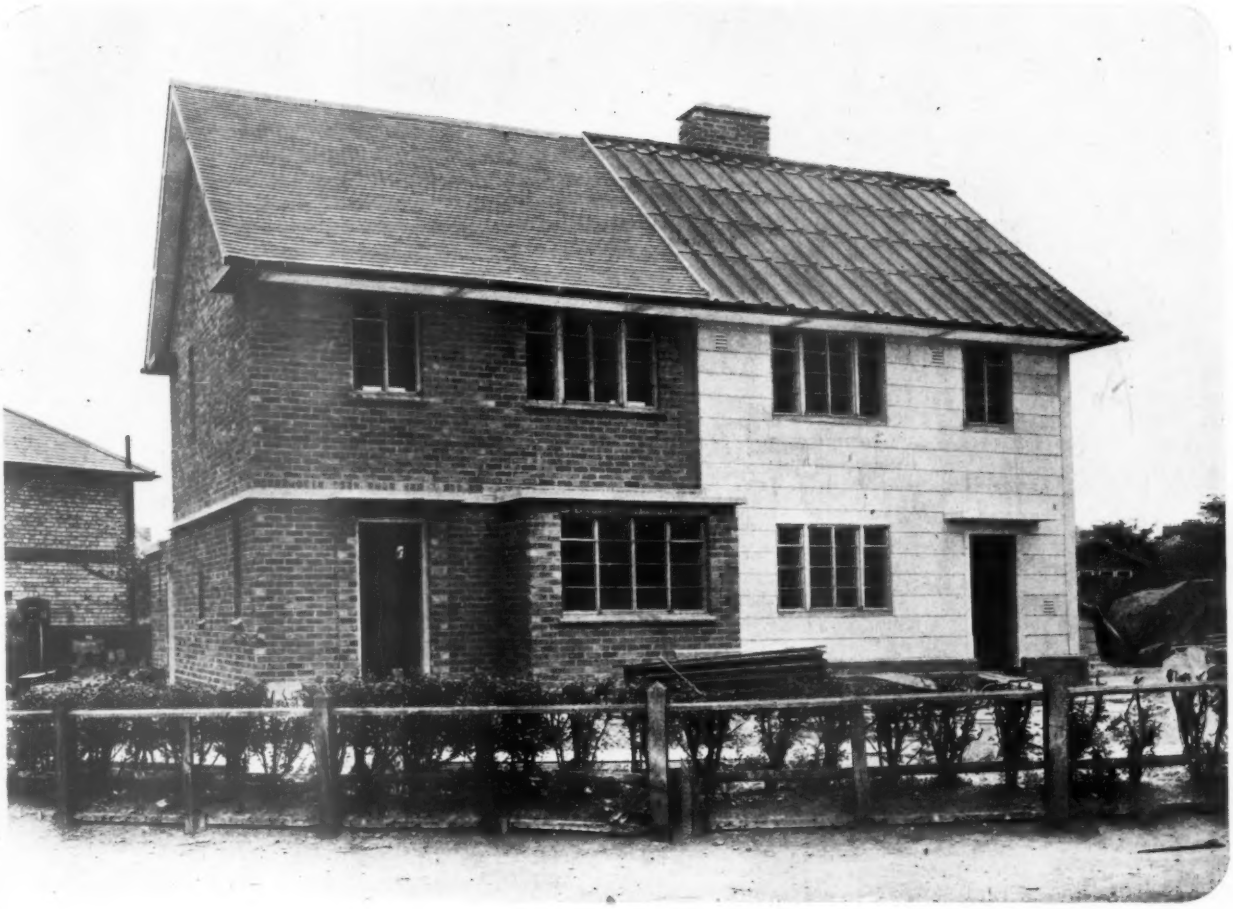
¼″ Wired cast	per ft. super	9½d.
‡¼″ Georgian wired cast	per ft. super	10d.
‡¼″ Polished Georgian wired glass	per ft. super	3/2

‡ For cutting to allow for wires in adjacent pieces to be "lined up," add 4d. per foot super.

Supplied in sizes up to 110 in. long and up to 36 in. wide.

PAINTER

Snowcem paint	per cwt.	56/-
White ceiling distemper	per cwt.	22/-
Washable distemper	per cwt.	from 44/- to 66/-
Ready mixed white lead paint (best), 5 cwt. lots, 14 lb. tins	per cwt.	96/6
Aluminium paint	per gallon	—
White enamel	per gallon	—
White enamel paint	per gallon	27/-
Stiff white lead (genuine English stack process, 1 ton lots, 1 cwt. kegs)	per cwt.	74/6
Liquid driers	per gallon	23/-
Linseed oil raw (5-gallon drums)	per gallon	6/11
„ „ boiled (5-gallon drums)	per gallon	7/2
French polish	per gallon	15/6
Knotting	per gallon	24/-
Oil stain (scumble)	per lb.	3/-
„ „ red oxide	per cwt.	72/-
„ „ middle Brunswick green	per cwt.	95/-
„ „ dark umber	per cwt.	105/-
„ „ golden ochre	per cwt.	82/-
Varnish (outside quality) oak	per gallon	22/-
„ „ „ copal	per gallon	24/-
„ „ „ flatting	per gallon	26/-
Turpentine, genuine American 5-gallon lots ..	per gallon	—
„ substitute	per gallon	4/-
Creosote, 1-gallon lots	per gallon	1/9
Putty	per cwt.	26/9
Utility Glazing Putty	per cwt.	21/3
Size	Per ¼ cwt.	30/-
Best quality English gold leaf, 23 carat ..	per book	3/6
Extra thick, ditto	per book	4/2



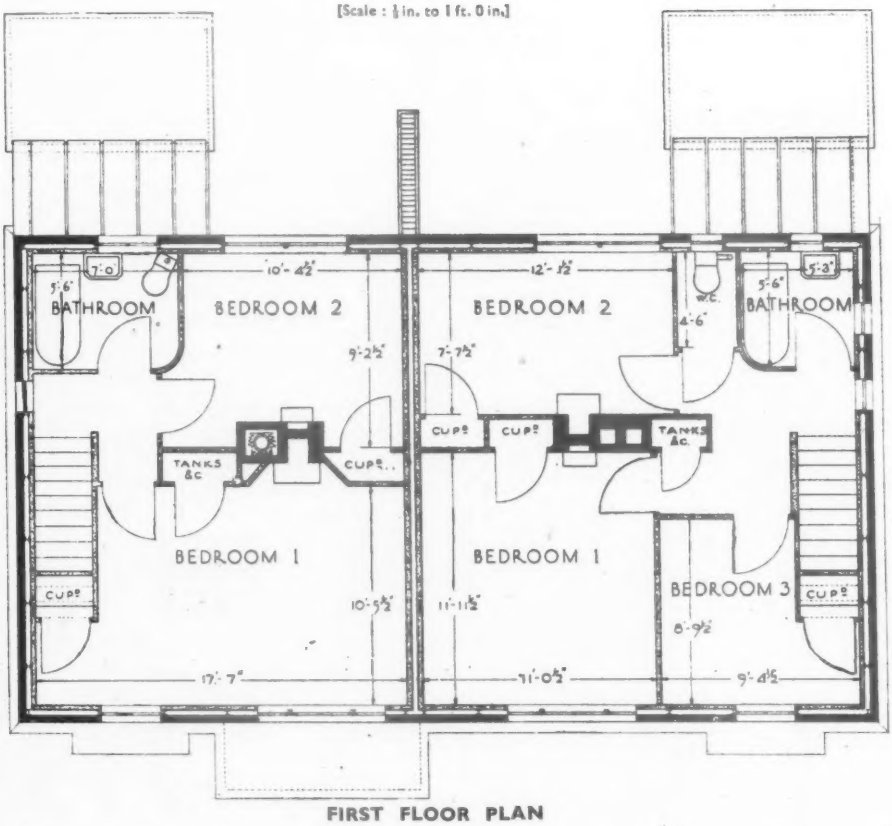
BIRMINGHAM'S EXPERIMENTAL HOUSES

DESIGNED BY HERBERT J. MANZONI, BIRMINGHAM CITY ENGINEER AND SURVEYOR

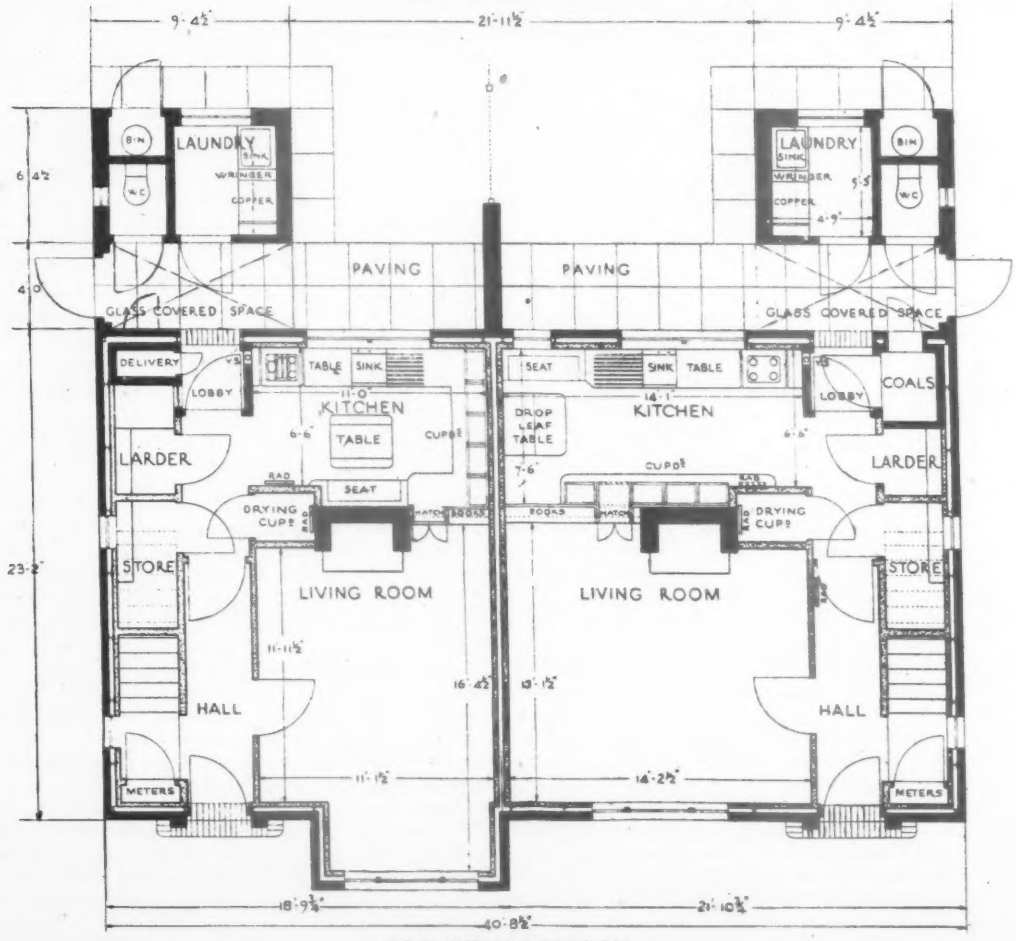
GENERAL—The structure consists of a light steel frame, within which a permanent house interior can be constructed with any suitable materials, prefabricated or otherwise, and which can be clothed with either a temporary or a permanent covering, the former, where used, being removed and substituted in two or three years time, by permanent materials as these become available. Because the steel frame has no internal supports, the inside of the house can be completely gutted, re-designed, and re-built to meet different conditions at a later date. By the use of an independent steel framework it is possible to complete the roof and even the first floors before the outer shell is built. Protection is thus afforded during construction.

FRAMEWORK—A patent type of steel framework is used, and consists of 3 in. by 2 in. stanchions, spaced at 3 ft. centres and composed of two 2 in. by $\frac{1}{8}$ in. mild steel flats with $\frac{1}{4}$ in. diameter solid round lacings spot welded between. The first-floor beams carried by these stanchions and spanning the full width of the house are similarly constructed with two $2\frac{1}{2}$ in. by $\frac{5}{16}$ in. mild steel flats spaced 9 in. apart vertically with $\frac{3}{8}$ in. diameter spot-welded solid round lacings in between. Steel roof trusses are constructed in a similar manner and at 3 ft. centres are supported by the stanchions. For the benefit of the general contractor, a light steel channel template is provided by the manufacturers of the steel framework. This channel rests on the concrete foundation, and receives the bases of the stanchions, which are bolted through into the concrete. The whole of the steelwork previous to erection is sand blasted and treated with two coats of hot bitumastic solution. A half-brick wall is built on either side of the stanchions from foundations

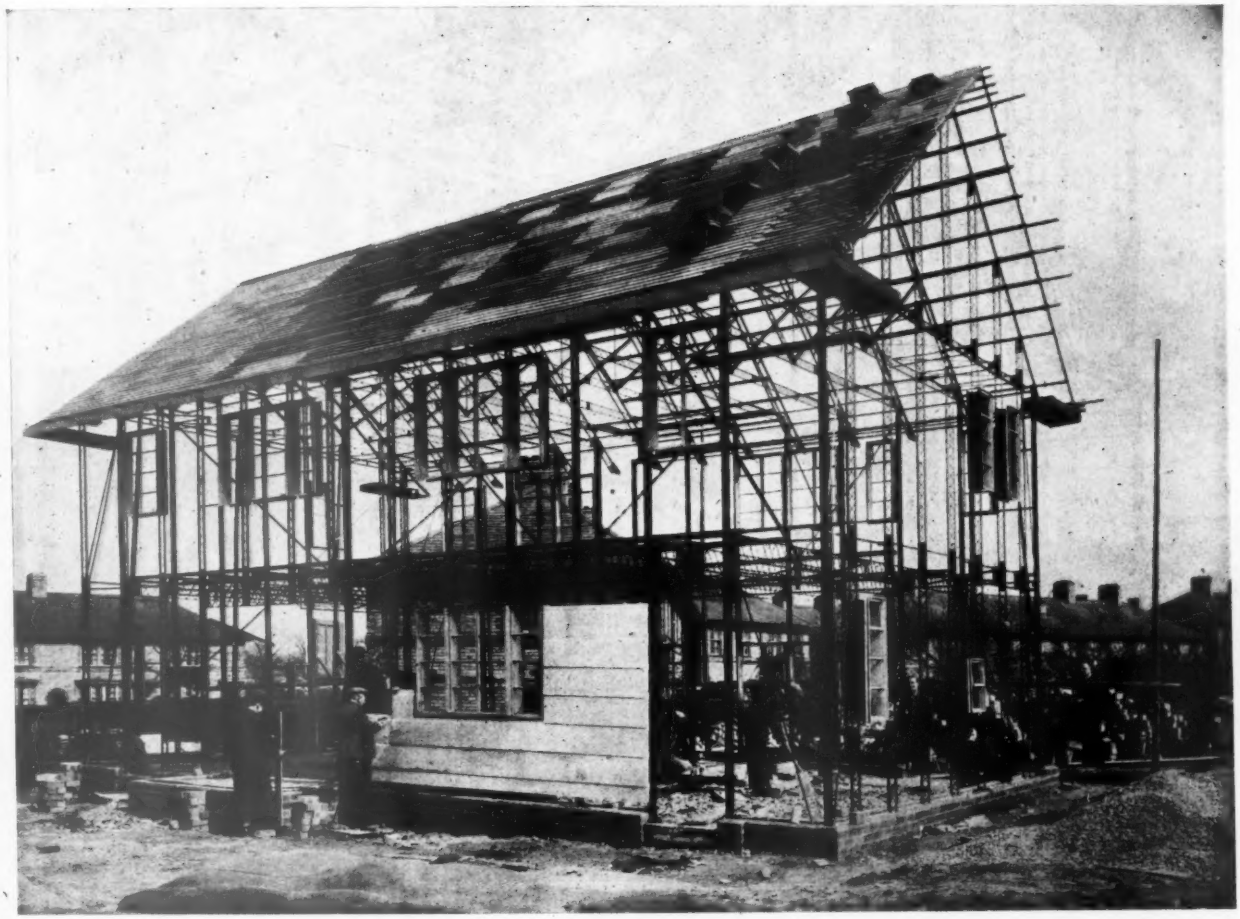
[Scale : ⅛ in. to 1 ft. 0 in.]



FIRST FLOOR PLAN



GROUND FLOOR PLAN



On facing page, ground and first-floor plans. House No. 1 is on the left, No. 2 on the right. The two-bedroom house has a floor area of 820 sq. ft., including laundry, and the three-bedroom house a floor area of 928 sq. ft., also including laundry. Above, the house in course of erection, showing part of the temporary asbestos cement cladding in position.

BIRMINGHAM'S EXPERIMENTAL HOUSES

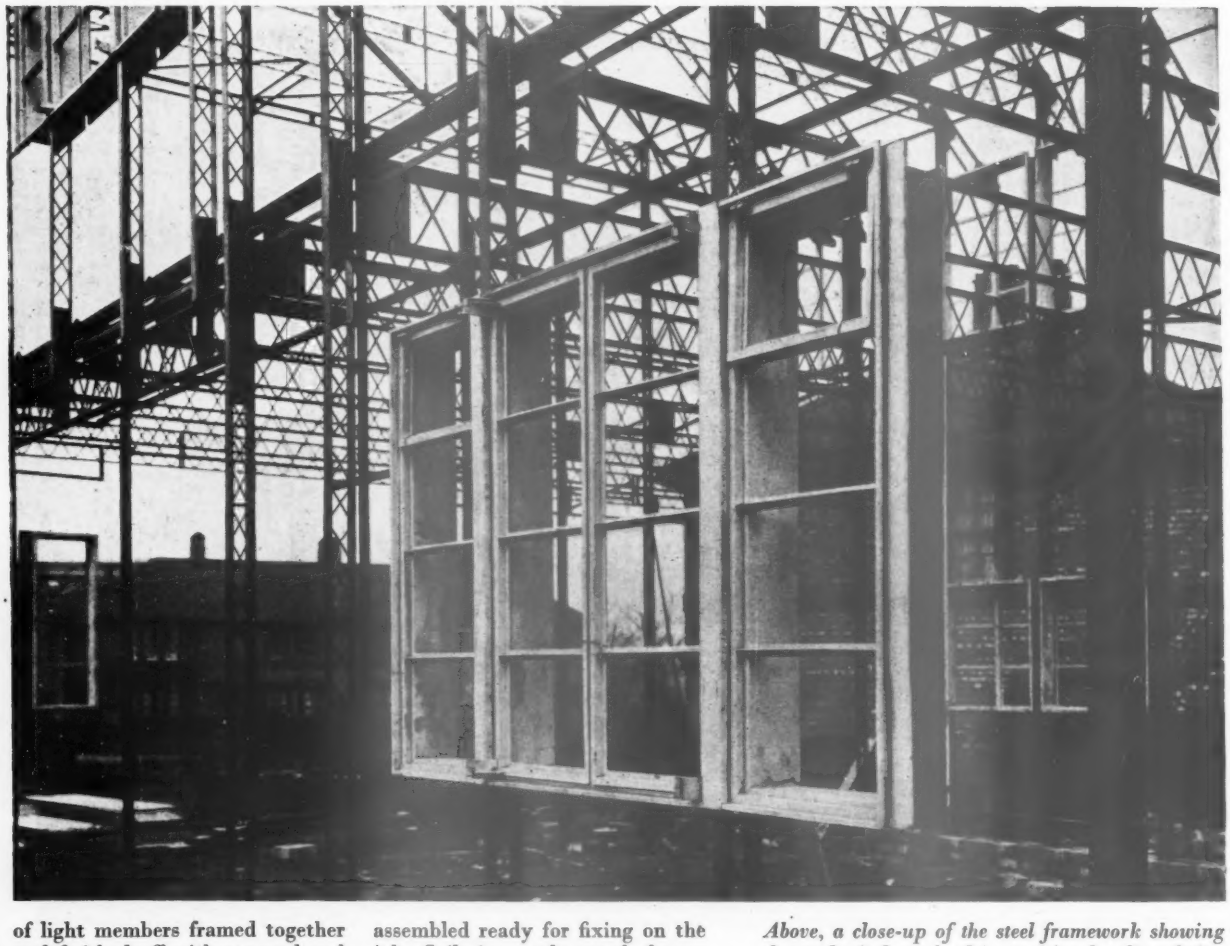
up to the ground-floor level, the cavity in between being filled in solid with concrete up to within a few inches of the top of the damp proof course. All steelwork is isolated from contact with floors, ceilings and walls with sound deadening felt.

CLADDING—In the two-bedroom house, the external wall cladding is permanent and consists of 4½ in. brickwork built against, and tied to, the outer flange of stanchions and isolated therefrom by felt at all points of contact. In the three-bedroom house the external cladding is temporary, and consists of horizontal asbestos cement sheets in two thicknesses secured to stanchions with counter-sunk galvanized bolts and star clips, and similarly isolated.

LINING—Internal wall lining and partitions consist of 4 in., 3 in. and 2½ in. coke breeze blocks in House No. 1, foam slag blocks in House No. 2, of similar thicknesses. All coke breeze and foam slag cladding and partitions are finished with a plaster skimming. To overcome the noise transmission between the houses, the party wall is constructed with two leaves of 3 in. foam slag with 3 in. cavity between, the two leaves being tied together with sound-resisting pads spanning the cavity.

ROOF—One house is permanently covered with plain machine-made sand-faced tiles, and the other house covered temporarily with brown asbestos cement tiles. The ordinary tiles and also the asbestos cement tiles are secured to light wood purlins fixed to metal clips previously welded on the top side of roof principals. These wood purlins are so spaced that every fourth course of ordinary tiles can be nailed. Laid in between the wood purlins are pre-cast reinforced coke breeze slabs serrated on top face to take nib of tiles. This method is applicable to both sides of the roof, so that immediately it is decided to remove the temporary asbestos tiles they can be replaced with ordinary tiles without disturbing the tenants.

FLOORS—Ground floors are of the solid type on concrete, and experiments are being made with various flooring materials such as Plydex, Granwood, and Pitchmastic. The floors to living rooms are finished in wood block or boards. The floor to House No. 1 is laid in prefabricated wood panels consisting



Above, a close-up of the steel framework showing the steel windows fixed in position by clips fitting into lugs welded to sides of stanchions. The steel frame has no internal supports and the inside of the house can therefore be completely gutted and rebuilt at a later date to suit new conditions.

BIRMINGHAM'S EXPERIMENTAL HOUSES

of light members framed together and finished off with tongued and grooved boarding. The floor to House No. 2 is laid with light-weight pre-cast reinforced concrete slabs, 3 ft. long by 1 ft. wide. All suspended floors have a quilted sound-proofing material laid between floors and ceiling below. Suspended ceilings are framed with patent ceiling board secured to underside of floor beams and tie beam of roof with metal clips or small wood battens.

DOORS AND WINDOWS—All windows are of steel in steel sub-frames, secured by clips fitting into lugs welded to side of stanchions. All doors are of the flush type, hung to metal linings and frames in House No. 1, and to wood linings and frames in House No. 2.

STAIRCASES—In one house the staircase is of wood, and in the other of reinforced pre-cast concrete treads and risers.

SERVICES—The plumbing to sinks and sanitary fittings are carried out on the one-pipe system, thereby obviating the unsightly external vent shaft and connections, constructed in copper. The whole of the plumbing is pre-assembled ready for fixing on the job. Soil pipes and vent shafts are fixed in duct adjoining back lobby. All service pipes are in copper, the pipe runs being out of view wherever possible. All pipes below floors and where likely to be affected by frost are lagged. House No. 1 is fitted with a patent two-in-one hot water tank with circulation in copper and supplying direct off the circulation, a copper coil in drying cupboard and copper radiator in kitchen. House No. 2 has the usual copper hot-water cylinder system with calorifier supplying radiator in drying cupboard, kitchen and hall. House No. 1 is gas heated, lighting being electric. House No. 2 has no gas and is mainly electric. Both houses are fitted with wireless. House No. 1 has an ovenless gas coke grate, placed in a recess in the living room, with a magazine feed and copper back boiler, together with a patent flue with heat radiating ribs carried up through first-floor back bedroom in a flue casing up to ceiling and fitted with louvred ventilators as a heating medium. House No. 2 has an ovenless grate of the Independent Convector type with copper back boiler and separate convector flue

INFORMATION CENTRE

The function of this feature is to supply an index and a digest of all current developments in planning and building technique throughout the world as recorded in technical publications, and statements of every kind whether official, private or commercial. Items are written by specialists of the highest authority who are not on the permanent staff of the Journal and views expressed are disinterested and objective. The Editors welcome information on all developments from any source, including manufacturers and contractors.

PHYSICAL PLANNING

1633 *New York Parkways*

HIGHWAYS AND PARKWAYS, *C. Rodgers.* (*The Studio, June,* 1944.) Description of New York Parkways carried out by Park Commissioner Robert Moses, which provide swift communication between countryside and the heart of City.

Most important of Moses' major contributions are city and regional parks, parkways and highway improvements generally. Boldest of the projects, now nearing full realization, is a belt parkway and express highway of over 100 miles, entirely within the city and completely encircling it, which can be traversed by motorists without interference by traffic lights, left turns or other obstructions. The city's parkway and arterial system is integrated with regional parkways and main arterial routes.

The term parkway is loosely employed. A Moses parkway can be clearly defined. "What the motorist sees is a continuous 'ribbon park,' carefully landscaped, through which a gracefully curving highway safely carries pleasure vehicles at forty miles an hour. (The speed limit inside the city is 35 miles). 'My idea of futility,' says Mr. Moses, 'is to build a beautiful parkway for speed demons who can't tell a flowering shrub from a bale of hay.' There are no traffic lights, grade crossings or left turns, and roadways on new sections are separated. Commercial traffic, signs, hot-dog stands and gasoline (petrol) stations are taboo, with the exception of a few motor service places built to blend with the landscape, and strictly controlled. Arched stone bridges enhance the charm of the ever-changing vistas. Lamp posts and low fences of hewn, unpainted timber are in keeping with the background, and everything about these 'ribbon parks' is designed to convey naturalness."

Inside the town the parkway becomes more than a traffic artery. "The pedestrian is given a freedom of movement without hazards which he has not known since the automobile became ubiquitous. Instead of being harmful to life, limb and property, the highway has become munificent and a thing of beauty. Instead of bringing death to children, this kind of highway brings them playgrounds, bicycle paths, swimming and wading pools, picnic grounds, handball and tennis courts. Schools may look out on it, and there are bridle paths for equestrians. There are 'sitting parks' and safe, quiet paths along the way for passive recreation, with promenades overlooking bays and lakes. Except for the strips of pavement, the parkway is a streamer of green, with trees and flowering shrubbery gracing the landscape. Compromises are inevitable in city parkway building, but the width of their ribbon parks is usually from three to six hundred feet, when they do not merge with larger parks, and open spaces around schools and other institutions. It is paralleled by service roads which replace local streets and provide access to private property. Not only the rights-of-way of parkways, but land adjacent is in restricted zones, giving homes, as well as the ribbon park, full protection from incompatible land uses and other common abuses, so that this type of thoroughfare, instead of being a liability, is the friend of the home and neighbourhood."

1634 *Kitchens*

CHOOSE YOUR OWN KITCHEN. *Adie Ballantyne.* (*Faber and Faber,* 5*s.*) Book for the housewife. Notes on most aspects of planning and equipment of kitchens. Likely to provide housewife with just enough ideas to make architect's life difficult.

STRUCTURE

1635 *Glasgow Houses*

EXPERIMENTAL FLATTED HOUSES IN GLASGOW. *J. H. Ferrie and W. Kerr.* (*The Architects' Journal, August* 17, 1944, *p.* 125-238.) Block of four houses of large reinforced foamed slag concrete units, mass-produced in a factory and erected by cranes.

The layout and elevation of the experimental block follow the design of brick houses built earlier on the same site. The external walls are only 6 in. thick in one single leaf. The wall units are erected on top of the ground floor and extend to the soffit of the first floor. The walls in the first floor are arranged in a similar way. Horizontal joints in the walls are avoided. The vertical joints are covered with metal scrim on both sides. The floors and the roof are composed of pre-cast reinforced concrete units.

The walls of the completed block are roughcast with cement rendering on the outside and plastered inside.

The experimental block is in many ways superior to the traditional brick house with timber floors and timber pitched roof. The method of manufacture and erection allow complete flexibility of design and features such as bay windows can easily be introduced.

1636 *Unit Frame System*

BRAITHWAITE UNIT FRAME CONSTRUCTION. *Cottages on the LCC Watling Estate. Consulting Architect: F. R. S. Yorke. Promoters: Messrs. Braithwaite & Co.* (*Architects' Journal, October* 5, 1944, *pp.* 251-256, *and other journals.*) Experimental house in light-framed rolled steel structure. Flexibility of layout and freedom in choice of cladding materials.

The frame is built up in ladder-like welded units of two-storey height. Alternative claddings are used—brick, asbestos cement, vitreous enamelled steel sheets, or even stone. The plan is based on a 38-in. grid, but considerable flexibility of planning is possible. Patent spring clips are used for fixing the external and internal sheeting direct to the frame. The floor and roof beams are inverted U-shape members in light-gauge steel. Various kinds of floors are possible, *e.g.*, light-weight concrete slabs and stiffened plywood panels.

The framework for a three-bedroomed house can be erected in one day by four men without scaffolding.

The system is an improvement on the Telford, Weir and Atholl types, used between the two wars in thousands of houses and the pleasant appearance shown on the perspective drawing should reassure those who are fearful of prefabrication.

East River Drive, East Side of Manhattan, formerly a notorious Dead End of slum streets. See No. 1633.

1637 MOW *Building Study*

MECHANICAL INSTALLATIONS. *The Ministry of Works Post-War Building Studies, No. 9. By a Committee convened by the Institution of Mechanical Engineers.* (*HMSO*, 2*s*.) Covers relation of installation engineering and building and recommends more co-ordination. Detailed sections of lifts, hoists, and escalators. Cooking installations (except for homes). Laundry appliances. Refuse disposal. Heating, ventilation, and air conditioning. Wells, bore-holes, and pumping. Building power plant and refrigerator equipment.

The first part of the report deals at some length with the old problem of better relationship between the professions, need for proper co-ordination of the work and for proper supervision and maintenance. Some of the difficulties are discussed and it is suggested that the professional institutions concerned should arrange joint discussions.

There are six parts to the technical section of the report. Much of the information contained in these will be helpful to architects, although a fair amount is obviously intended primarily for engineers. Some of the opinions expressed are rather surprising. For example, in the section on heating of schools, floor panels are first described as "a further advance in modern practice, particularly with premeditated design," while a few lines later they are said to cause higher temperature gradients than ceiling heating and also to cause drying of floors and thereby spreading of organic or other undesirable matter from students' boots. It seems unfortunate that floor heating should be thus dismissed without any evidence being put forward for the statements made. Some people consider that floor panel heating gives very favourable temperature gradients indeed. Similarly, a statement relating to reduction of noise from internal combustion engines to the effect that airborne vibrations can normally be dealt with by insulating the adjoining walls with sound absorbing and insulating material is at best only a partial truth.

MATERIALS

1638 *Concrete*

SPECIFYING CONTROLLED CONCRETE. *R. F. Moss.* (*Engineering News Record, August* 10, 1944, *pp.* 152-155.) Present-day specifications responsible for uneconomical and inferior concrete because of lack of incentive for producer to use accurate control methods. Specifications assuring improved quality with greater cost savings suggested, in which emphasis variously placed on strength determination, quality bonuses and profit sharing.

1639 *Glass*

THE PLACE OF GLASS IN BUILDING. *John Gloag.* (*Second Edition, published by Allen and Unwin*, 1944, 5*s*.) Handbook of glass types and uses, with two short notes on glass in architectural education and in small house design.

Mr. Gloag's convenient and attractive handbook on glass, which is now issued in a second edition, has been reviewed previously in these columns (No. 1134:6.5.43). More material has been included in this edition, and there is a slight rearrangement of it.

One odd point about the second edition may be noted here. In his new introduction Mr. Gloag takes issue with the original review here in which reference was made to the fact that one of the big sources of heat loss in windows is the air infiltration which occurs through cracks in frames, and the suggestion was made that if this was corrected there was less objection to very large windows. For some reason or other Mr. Gloag devotes the whole of his new introduction to this remark, and to what appears to be intended as a refutation. His own remarks are devoted to expounding the point that windows trap the sun's heat and are therefore useful in winter.

1640 *Plywood Glues*

WEATHERING QUALITIES OF PLYWOOD GLUES. *R. A. K. Knight and L. S. Doman.* (*Wood, June*, 1944, *pp.* 136-140). Article which is an abbreviated version of Report prepared by Forest Products Research Laboratory on experimental work examining the behaviour of glue under severe weathering conditions. Resistance to moisture and micro-organisms.

The virtues of plywood depend primarily on the adequacy and permanence of the bond between the constituent veneers. With the advent of synthetic resin adhesives, which in some forms are completely moisture-proof and rot-proof, the field of plywood utilization has been vastly extended. For many uses of plywood glues of low water resistance are quite adequate; on the other hand, where exposure conditions are severe, it is imperative that the adhesive used should be equal to its task. The object of the experimental work described is to show which glues are suitable for severe services. The Report can be divided into three parts.

I. *Long-term Weathering Tests on Plywood Panels.*

Nearly fifty adhesives were used in the plywood made for the weather tests. The results show that phenolic and neat urea resins, together with urea formaldehyde, extended with not more than 25 per cent. of flour can be grouped as the "more weather-resistant" adhesives, the remaining glues as "less weather-resistant." Urea resins extended with flour beyond 25 per cent. quickly lose weathering resistance, and blood albumin, although initially high in water resistance, deteriorates rapidly. Casein glues are not suitable for plywood that will be exposed to severe weathering.

II. *Resistance of Plywood Joints to Moisture and Micro-organism Attack.*

The four tests employed were Dry strength, Wet strength, and the mycological trials under Sterile and Non-Sterile conditions. The object was to ascertain the effects of short-term or accelerated tests on the various panels for comparison with their behaviour under "natural" or long-term weathering exposure. By these accelerated tests it would seem that only straight resin adhesives or those containing a maximum of 50 per cent. flour are suitable to all weather conditions.

III. *Correlation between Weathering Tests (Part I) and Resistance of Plywood Joints to Moisture and Micro-organisms (Part II.).*

A working relation between accelerated tests and long term weathering trials has been established, by which a reasonably accurate judgment can be made of a plywood's worth for use under severe exposure conditions.

Investigations were made to determine the weathering qualities of the glue and not the durability of the timber species employed in the plywood; this and the related problem of treating plywood and veneers with preservative materials, will be the subject of another experimental work. Tests on the effects of adding toxic substances to some adhesives liable to destruction by micro-organisms were included and it was found that the addition of low concentration of such toxics had only a slight effect on the life of the glue.

QUESTIONS and Answers

THE Information Centre answers any question about architecture, building, or the professions and trades within the building industry. It does so free of charge, and its help is available to any member of the industry. Answers are sent direct to enquirers as soon as they have been prepared. The service is confidential, and in no case is the identity of an enquirer disclosed to a third party. Questions should be sent to: THE ARCHITECTS' JOURNAL, *45, The Avenue, Cheam, Surrey.*

1641 *Stoves*

Q *Would you inform me: (a) Who are the manufacturers of Courtier stoves as used in the Unibuilt demonstration houses, Coventry; (b) Are they designed primarily for space heating; (c) Was the ducting used for heating the bedrooms specially made?*

A Courtier stoves are manufactured by Michell, Russell & Co., Chatham Foundry, Bonnybridge, and can be used for either space heating or the normal domestic supply. The ducting was specially built for these houses.

1642 *War Damage*

Q *I have a certain amount of War Damage claim work to deal with, and shall be glad to know of official publications on this work. I have, of course, the original Act, and am getting the Practice Notes issued by the Stationery Office. I have also received the details regarding procedure from the RIBA.*

A The Official Publications most likely to help you are:—

Form C.1.A. *War Damage to Lands and Buildings*—A short explanatory pamphlet on claims under the War Damage Act, 1941, Part 1.

Form C.2.X. *War Damage to Lands and Buildings.* — Explanatory notes on claim for Costs of Works and temporary works payments in respect of houses, flats, tenements or office buildings, under the War Damage Act, 1941.

Form Rod. 1. *War Damage Commission, Costs of Works*—Explanatory pamphlet issued by the War Damage Commission in agreement with the National Federation of Building Trades Employers, as to procedure in arranging for the repair of war damage and the assessments and payments of costs of works.

Form C.1.A. is obtainable free, from the War Damage Commission, Devonshire House, Mayfair Place, Piccadilly, London, W.1, or from your local Regional Office. Form C.2.X. is obtainable from H.M. Stationery Office, price 1d., as is Form Rod. 1, price 3d.

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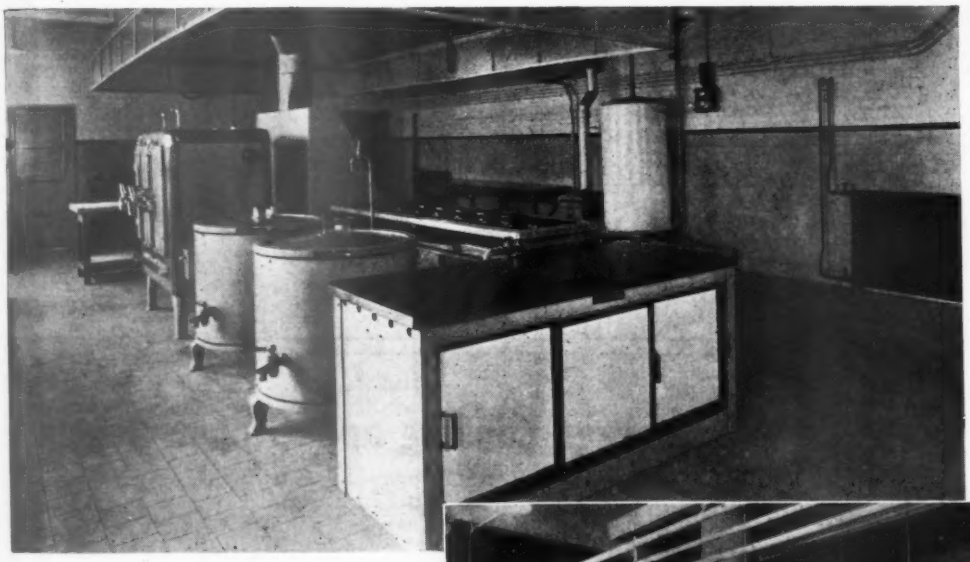

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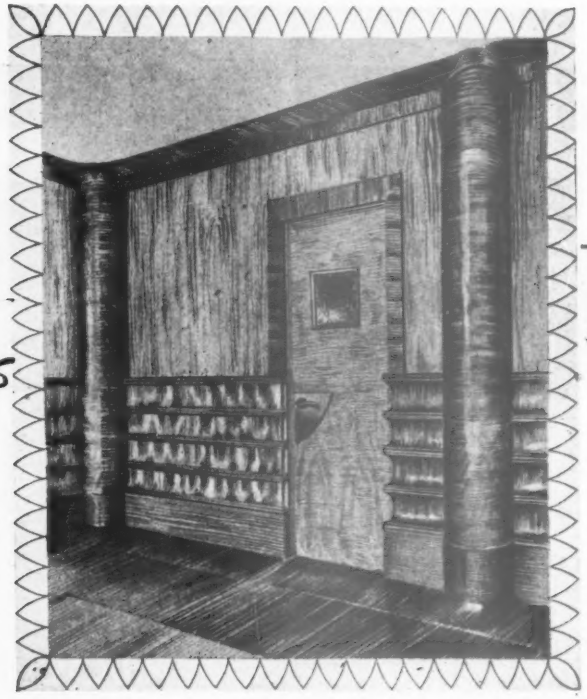

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SOCIETIES AND INSTITUTIONS

Speeches and lectures delivered before societies, as well as reports of their activities, are dealt with under this title, which includes trade associations, Government departments, Parliament and professional societies. To economize space the bodies concerned are represented by their initials, but a glossary of abbreviations will be found on the front cover. Except where inverted commas are used, the reports are summaries, and not verbatim.

HC

F. J. Forty

September 19, at 13, Suffolk Street, S.W.1. Talk to the Housing Centre on THE REPORT ON THE PLANNING OF THE CITY OF LONDON, presented to the Court of Common Council by its Improvements and Town Planning Committee by F. J. Forty, the City Engineer. Chairman: E. J. Holland.

F. J. Forty: The plans are suggestions for reconstructing areas that have been badly devastated, together with other areas that would probably have been dealt with even if there had been no destruction. A report presented to the Common Council in 1936 included certain proposals as to the use of land, height of buildings and traffic flow. In 1937 the Greater London Highway Development Survey suggested a ring road, and in the present report this has been adopted with modifications.

One of the new proposals is for a road starting at Holborn Viaduct and striking north-east across devastated land to Aldersgate Street. There a large traffic roundabout is suggested. Passing north of St. Giles church, which with its garden it is hoped to restore, the intended road goes along Fore Street to Moorgate Street, where there is another roundabout. Then south of Finsbury Circus to Bishopsgate. There another roundabout and then along Houndsditch and the Minories to Tower Hill. Here the existing gardens would be merged into a larger open space, and at the same time there would be a properly worked out connection with LCC traffic. The ring road continues east to west from the Tower to Blackfriars. Between the Tower and London Bridge there are wharves and quays which must be retained. These are used by seagoing ships, but above London Bridge most of the traffic is by smaller craft, and it is possible to consider variations from the policy of complete retention of wharfage space. Accordingly a road has been contemplated from London Bridge to Blackfriars made on an embankment on land reclaimed from the bed of the river. On the north side of this embankment would be lagoons wherein barges can lie, reaching the lagoons by tunnels beneath the embankment. But this proposal has not been adopted because the consequent narrowing of the stream would increase the scour that tended to undermine the bridges. Another proposal is for a road along Thames Street to a point where the river widens out below Blackfriars Bridge. There an embankment will be made. This plan does not make lagoons or give any facilities for wharfage. It will interfere with a large and nearly new building at the head of Southwark Bridge. A third proposal is for an embankment from Blackfriars to a point on the foreshore determined by extending southwards the axis of the transepts of St. Paul's. Thence the traffic travels along Upper Thames Street as far as Queen Street Place, where a roundabout is established. By whatever route traffic passes from the Tower to Blackfriars an embankment is proposed for part or all of the way.

The city traffic grew enormously between 1904 and 1935. A very considerable part of this was through traffic, and it is hoped that lorry drivers and others will prefer the new arterial road eighty feet wide to those passing through the city.

In planning new roads or widening existing ones, it is not possible to ignore underground services. Under every street there are sewers and mains for electricity, gas and water, besides hydraulic mains, railways and subways. It is proposed to carry out a great deal of widening but not to any great width.

With regard to St. Paul's, the clearance from the river up to the southern transept will give the vista of the cathedral of which everybody admits the desirability. All present are familiar with the proposal for terracing from the Thames up to the higher ground on which the building stands, and this will be a very fine scheme if carried out. At the west end of St. Paul's it is proposed to establish another clearance. With regard to the east end, by widening St. Paul's Churchyard, this will be made suitable for traffic, and at the same time a view will be given of the cathedral. On the axis of the north transept it is proposed to have a clearance joining with Newgate Street. This will not be a traffic road but will be kept for pedestrians and might on occasion be used as a ceremonial way.

The primary factor in determining the height of buildings surrounding St. Paul's, apart from restrictions under the London Building Act, is that their height shall be related to views of the dome. That feature of the city skyline must be preserved and, according to the proposals now made, there will be no building with a cornice height of more than sixty feet within at least one hundred feet of the cathedral.

With regard to railways, before the war about half a million people came daily to the city, and the Corporation does not contemplate any reduction of facilities; but if proposals can be made which do not conflict with this axiom they will be considered.

Discussion: In reply to a question the lecturer said he would not be prepared to waste existing underground services, or destroy buildings with many years of useful life, merely to get a wider road or better view.

Mr. Kent said the proposed ring road had so many roundabouts that he doubted whether lorry drivers would use it. There was very little green in the City of London: the present opportunity to increase open space should not be missed. Mr. Forty replied that the principle of establishing small open spaces was well to the fore in the mind of the Corporation, but it was unlikely anything in the nature of a park would be established.

Mr. J. Bunge said with regard to the proposed embankment, if the Thames was barred and thereby made tideless there would be no scour.

Mr. Mundy said the County of London plan provided for reducing the population of the centre of London, but the Corporation plan envisaged a similar population to that before the war.

The lecturer replied that the view of the Committee was that commerce was the primary function of the city, and this function should be maintained to at least the same intensity as had existed before the war. It was considered that when redeveloped the population would be equal to what it had been.

In reply to other questions, Mr. Forty added that the possibility of residential flats within the city boundaries or near them was contemplated. Such flats would be convenient for post office and other workers. Cheapside had been the main centre of city shopping, and it was hoped it would revive; but the bringing of people from the west end to shop in the city was not contemplated. There was no allocation of space for theatres or cinemas, but it might be possible in redevelopment to plan for a cinema.

Mr. Bunge said that in the beginning of the replanning period some mention had been made of a civic centre to be behind the Guildhall. Mr. Forty replied that in his original proposal he had said it might be possible to develop the area north of the Guildhall as a centre in which might be erected city offices, and possible a common Livery Hall also for the use of City Companies whose halls had been destroyed.

LMBA

Electric Tools

September 13, at the Salisbury Hotel, Barnet. Luncheon given by the Northern Area of the London Master Builders' Association, in connection with a demonstration of PORTABLE ELECTRIC TOOLS. Speakers included F. C. Orchard, M.I.E.E., A.M.I.MECH.E., Chief Electrical Engineer and Manager of Hornsey Corporation, H. F. Greenfield, of Black and Decker, H. C. Harland, President of LMBA, and T. P. Bennett, F.R.I.B.A. Chairman: J. A. Birch.

F. C. Orchard: The objects to be achieved are increased production speed and lower costs, both of which are intimately tied together in the one word Planning. These questions arose: (i) How can we improve the time factor in building construction work? (ii) What technical developments during the war can we adapt? (iii) Can we further standardize in methods and operation, as well as in component parts in such work? (iv) What can we do with existing employees and what types shall be absorbed in post-war building employment?

In this war, the time factor in building construction works has been a really prime factor. The urgency of post-war building construction and reconstruction will hardly be less than that necessitated by the war. We can and must apply war-time technique to improve the time factor.

All of us, sooner or later, learn by experience that there is an upper limit to our individual efforts and in the particular case

of trade operatives in any industry that limit is largely governed by physical resistance to fatigue. Reduce fatigue and the ability to increase output follows as a natural corollary. In only one way can that be done effectively and collectively, and that is by the use of mechanical aids to muscular effort.

The solution to the problem is, therefore, tools, tools and more tools of the self-operative type. Employers must become more and more machine-tool minded, and the operatives must be educated accordingly.

It is almost a truism to-day to say that for every job there is an appropriate machine tool or one designed for an allied job which could be adapted. For example, one of the latest appliances takes the form of a normal hand saw operated at a tooth speed of approximately 1,200 ft. per minute, and will cut plastics and glass. This effect is based on the friction heat originated by the high speed sawing process; it melts the materials without burning either their edges or the saw teeth. How many people would guess it will also cut metal? Small machine tools are available for cutting corrugated iron sheets, gauging plaster and brickwork for letting in electric wiring conduit and water pipes.

The Americans have introduced the Saw Gun for cutting wood, plastics or metals in places inaccessible to ordinary tools such as panel notching and slotting. The saw can be replaced by a file. Either tool is fitted to an attachment which in turn is fitted to a standard drill.

Another form of tool is a vibrating table made this time in England for the purpose of producing precast sections with a low water-cement ratio. Small magnets are charged with alternating current at 50 cycles per second, which causes the table to vibrate at 6,000 cycles per minute. Concrete almost unworkable by normal methods is placed on the table and vibration shakes it down to a very homogeneous mass. In fact the crushing strength of precast reinforced concrete can be increased from about 2,000 to 5,000 lbs., while on the latest high frequency models the figure can be increased to 8,000 lbs.

Another development consists in passing alternating current at low voltage through freshly moulded blocks. The shrinkage time has been reduced by this method from 30 days to 8 hours, while the shipping weight was reduced from 50 lbs. to 34 lbs. in 7 days, as compared with 50 lbs. to 40 lbs. in 3 months. Pre-cast light-weight roofing tiles can be cured in 5 hours and used immediately without fear of breakage.

Electricity is used in America to pre-stress reinforcing steel. The method used is to temporarily expand smooth reinforcing rods by an electric current after the concrete has hardened. The rods are coated with a thermo-plastic material such as sulphur, which melts and relieves the bond only while the rods are temporarily heated by the electric current. When expanded, nuts are taken up at the screwed ends of the rods a predetermined amount, to provide the desired pre-stress. It is of importance to note that the bond is restored by resolidification of the sulphur coating, and that the quick heating of the rods does not warm the concrete appreciably.

The main purposes of pre-stressing are (i) to save reinforcing by permitting higher unit stresses; and (ii) to overcome shrinkage in the concrete. Other benefits are of course the increased shear strength for a sound body under tension can withstand very little shear stress, but because of the compressive stress the entire concrete section helps to carry the load. In ordinary reinforced concrete work only the top third or so of concrete is capable of carrying the direct stress, the remaining concrete being assumed as cracked, throwing the entire remaining burden on the steel.

Many and varied are the tools available, and a small assortment is exhibited here for your inspection.

This is an engineer's war without a doubt, and many of the operatives who are serving in it have received training in the use of many types of mechanical aids and will return with a greater appreciation as to what tools, and machine-tools in particular, can do. It is up to all of us to take advantage of this fact.

H. F. Greenfield: The design of Portable Electric Tools has been greatly improved during the past few years, particularly in regard to the power-to-weight ratio where the increase is very considerable. Instead of the heavy unwieldy tools of earlier design, we have to-day a complete range of powerful light-weight tools, ruggedly constructed and capable of years of trouble free service.

Some tools were designed for particular jobs, but by experiment it has been found that with the addition of various accessories such tools can be used for a multitude of varying jobs, saving time and effort on the part of the operator. As an instance of this, let us take the Portable Electric Saw, which was, of course, originally designed for speedy work in wood. While being approximately ten times faster than the ordinary hand saw, it is possible, by changing the blade, to cut a variety of materials from brick to non-ferrous metals or corrugated iron. By being able to cut accurately some of the more expensive materials used in building, the Portable Electric Saw not only saves the operator time, but will cut down the waste material which has always been one of the bug-bears in constructional building.

For grooving and regrooving of inserts in stone or composition steps, the Electric Saw will very quickly save its cost, and is widely used by maintenance engineers on large buildings where this work constantly has to be carried out. On cast-iron pipe-cutting and slitting, the Saw with an abrasive disc, will make a neat and speedy job. Saws are in regular use by Telephone Engineers where a quantity of pipe slitting on junctions is involved.

One of the great advantages of the Portable Electric Saw is that it requires no particular skill on the part of the operator, and has been used with considerable efficiency during the War by women. I feel sure that it will prove a great asset in the hands of unskilled labour in the days to come.

So much for the Electric Saw. And now let us take the Electric Drill. I need tell you very little about it for the Drill is probably one of the best known power tools in any trade. The jobs for which this tool is used are too numerous to mention, but I would like to draw your attention to one which I think is worthy of a few words from me. The capacity of a Portable Electric Drill can be very considerably increased by the use of Holesaws, and it has been found that the time saved in cutting round holes up to 4 inches in diameter in a variety of materials has paid for the cost of both the Drill and Holesaws in a very short time. When in the past it was necessary at times to cut fairly large holes in girders, it was normally done with an acetelyne cutter. To-day with the addition of a Holesaw the Electric Drill will cut the exact size hole required in a fraction of the time. Similarly for cutting tanks, the exact size holes can be provided by this method quite easily. The range of Hole saws includes the recognized tap sizes for both gas and plumbing work. The Portable Drill can easily be converted into a bench drill by the addition of the Drill Stand, which offers an easy and inexpensive way of drilling repetition work in the shop.

The Electric Screwdriver is perhaps more specific in purpose, but wherever the hand Screwdriver is used the Electric Screwdriver will perform the same operation very many times faster, and without effort. Imagine, for instance, 3 in. number 16 screws being driven into hard wood by hand. It would need quite an effort on the part of the operative. With the Electric Screwdriver, this job can be performed in a fraction of the time without any fatigue. In the majority of instances it has been found that the Electric Screwdriver is approximately fifteen times as fast as the hand driver, which brings the cost of screwdriving down to the level of nailing, thereby offering obvious advantages. There is, of course, no need for me to tell you the various jobs which can be performed with the Screwdriver.

So I will pass on to Concrete Vibrating. With the development of vibrated concrete we have produced an electrically driven Vibrator for direct use on Shuttering. Apart from its use in vibrating concrete on site, this unit can be attached to formers and tables on pre-cast fabrication work. Whether concrete is vibrated or poured there are always shutter marks which are difficult to remove, particularly with exterior work which requires a perfect finish. This can be effectively achieved by the use of a Disc Sander. With this tool concrete can be faced so that the aggregate is brought out to a final polished finish which has a remarkably attractive appearance. The Sander covers the whole range of this work by the use of a variety of abrasive wheels and discs. Its wide scope makes it a particularly useful tool in the several branches of joinery and building; and for wood sanding, rubbing down, rust removing and all kinds of surfacing it is a great time and labour saver.

While on the subject of concrete, I should mention the Electric Hammer. This is made in various sizes, which will take care of all drilling, chipping, cutting and chasing, in brick, concrete, pre-cast stone, and allied materials. The field of use for the Electric Hammer is very wide one, and includes such operations as tampering and vibrating where the job is otherwise inaccessible. An interesting use for the smaller Hammer is clearing putty from steel window frames when reglazing, and of course its uses for Rawlplugging and drilling for conduit are manifold.

Another interesting tool is the Lectro-Shear, which is really a mechanical snips, but has the advantage of a short blade with rapid cutting strokes capable of working down to a $\frac{1}{4}$ in. radius. This Shear will cut up to 16 gauge in steel and slightly more in softer materials. It has been successively used in plywood up to 5 m.m. Uses in the building trade would be mostly for monel metal or work in stainless steel fittings, flashings and coverings on roofs and gables. For prefabrication work in pressed steel it is invaluable in manufacture. Speaking of prefabrication, the assembly of buildings is considerably speeded up by the use of Electric Screwdrivers, Drills, Sanders, and Portable Grinders.

Portable Grinders are interesting tools as they are built in a variety of sizes and are ideal for removing weld-flash, generally wire brushing and cleaning up materials where an angle head Sander cannot be brought to a particular job.

The full extent of Portable Electric Tool applications is, of course, not entirely known to us manufacturers, and this is where you folks in the Building Trades can begin to help yourselves. For our part we are willing, and only too pleased, to experiment and assess any problem you care to present, and to this end we have technical men stationed throughout the British Isles.

H. C. Harland: This meeting is a gratifying result of the Association's interest in the use of small electrical tools, a subject which we have been considering with great care, particularly since the report of the recent Ministry of Works Mission to America. We hope

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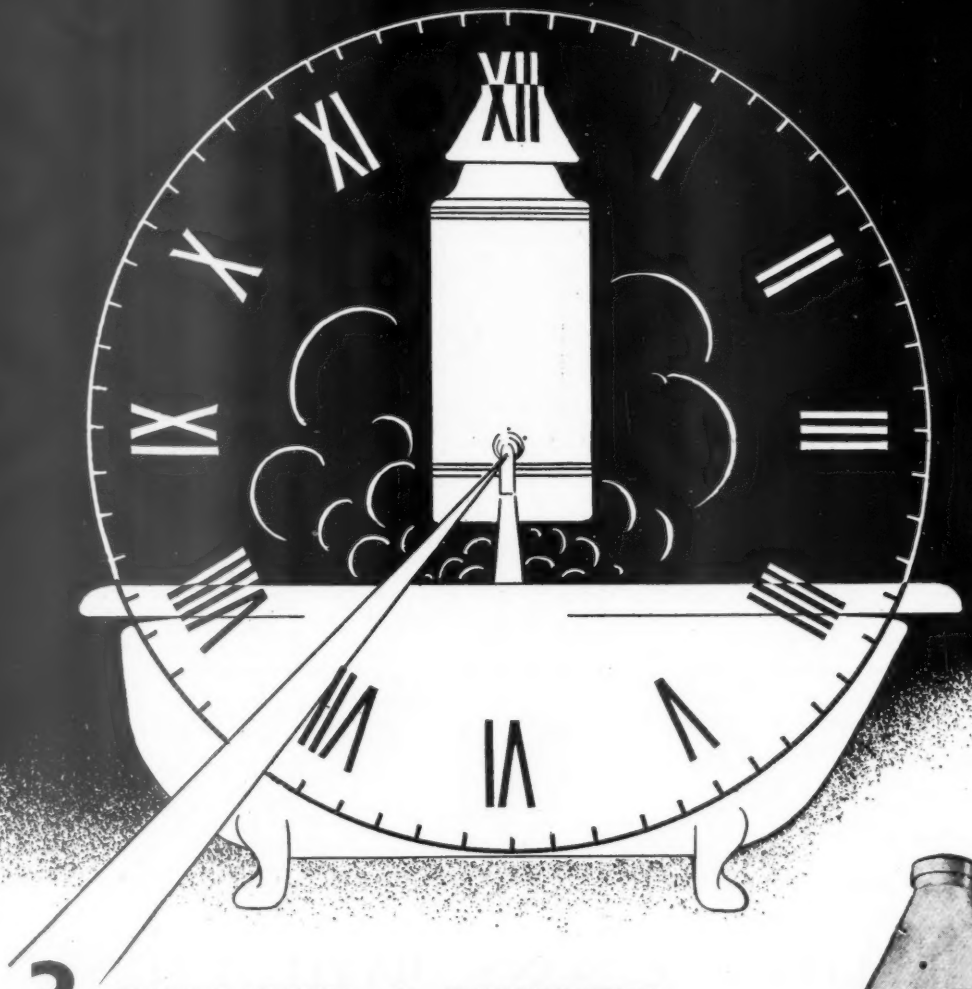

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that before very long the LMBA will organize a demonstration of tools which will enable builders throughout the London area to see the various mechanical aids now available to them. The increased use of mechanical tools is one of the most important methods by which building costs could be reduced.

T. P. Bennett : One of the difficulties the architectural profession will have to face after the war will be the demand from people to see immediate signs of activity on building sites. It is wasteful to send the builder on to a site before the plans have been completed, but in the early days after the war architects, working as they inevitably will be, with small staffs, will find themselves forced to pass on plans before they are completed.

Another difficulty which the architect always has to face is the virtual impossibility of getting the client to refrain from changing his mind after the plans have been prepared, building contracts have been signed, and materials have actually been ordered. People fail utterly to realize that because a building is not up it is not a simple matter to change this or that.

EJMA

Annual Meeting of the English Joinery Manufacturers' Association. Extracts from the President's REPORT are given below.

Amongst miscellaneous matters the fact that the EJMA specification for standard wood casements and doors has been adopted as the British Standard Specification, and that the same remark applies to the post-war panelled wood doors evolved by this Association and the BDA is of outstanding importance.

You will know also that we have designed a range of EJMA Standard Kitchen Units in accordance with the overall sizes agreed by the Ministry of Works, and that these kitchen units have been exhibited at the Building Centre, and the "When We Rebuild" Exhibition which is now appearing in the Provinces, and that we have exhibited at the Leeds Exhibition. You will by now all have received the negatives of the drawings of the window and kitchen units, and although I know it has been promised you for a very long time now, it is our hope that the complete Data Book on these items will very shortly be published.

The next thing I want to mention is the Scottish Joinery and Door Manufacturers' Association. You will be aware that negotiations have been proceeding for some time between them and us, but rather on the basis of their affiliation as an Association to ours. At one time it seemed as though not very satisfactory progress was being made in this direction, but I am glad to report that as a result of a visit paid within the last two weeks to Scotland by Mr. Greenham and Mr. Hustler at the request of the Scottish Joinery and Door Manufacturers' Association, the members of the Association have all expressed their intention of becoming individual members of our Association. The general outcome can be viewed with very great satisfaction indeed, and especially the offer of one of the Scottish members to approach the Joinery Manufacturers in Northern Ireland with a view to their also becoming members. If this should come about the Association will truly be becoming representative of the joinery trade of the United Kingdom, and I believe that perhaps in due course we may have to consider changing the title of our Association to indicate this.

In spite of our satisfactory interview with Lord Portal in February it became evident a little time ago from reports of our members and from information gained by our representation on the Council of Building Materials Producers and the Joinery Reconstruction Committee, that the planning of post-war houses by Municipal Authorities was still proceeding on the basis of more or less timberless houses in respect of manufactured woodwork, and that in so planning the municipalities were still taking their cue from instructions issued by the Ministry of Works.

Mr. Austin, who was responsible for bringing some of these facts in front of us, pressed that immediate action should be taken, and as a result of a letter by Mr. Greenham, Lord Portal granted an interview to Mr. Austin and Mr. Greenham, with most satisfactory results, and after a further interview with Sir Hugh Beaver, the Association received a letter from the Ministry giving it the assurances which it required.

I do not think it would be right to conclude my report without making reference to the fact that this is the 40th anniversary of the English Joinery Manufacturers' Association and to the very satisfactory and significant fact that whilst when it was reconstituted and came to London at the end of 1939 it had only 65 members, it has now 128, with other applications still under consideration, and this quite apart from the substantial increase which will take place when the Scottish Joinery and Door Manufacturers' also become members of the Association.

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Replies to Box Numbers should be addressed care of "The Architects' Journal." War Address: 45 The Avenue, Cheam, Surrey.

Public and Official Announcements

Six lines or under, 8s.*; each additional line,* 1s.

THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. ADDRESS: 75 EATON PLACE, LONDON, S.W.1. TEL.: SLOANE 5615. 991

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The post will be one of special responsibility, and this may be recognised for salary purposes. The successful applicant will be given opportunity for research.

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Forms of application can be obtained, by sending a stamped-addressed envelope to the Clerk to the Governors at the College, to whom applications should be returned by the 31st October, 1944.

B. E. LAWRENCE,
Chief Education Officer.

County Offices, Chelmsford. 824

CITY OF PORTSMOUTH.

CITY PLANNING AND RECONSTRUCTION DEPARTMENT.

Applications are invited for the following appointments in the Office of the City Planning Officer and Reconstruction Architect, engaged on the preparation of plans for the reconstruction and future development of the City and its environs, and Statutory Planning within the Authority's Administrative Area:—

(1) ASSISTANT PLANNING OFFICER.—Applicants should be corporate members of the Chartered Surveyors' Institute and Town Planning Institute, and/or hold appropriate academic qualifications, with substantial experience in the valuation of property, estate management, and the preparation and administration of Statutory Planning Schemes. The commencing salary is £850 per annum, rising to £1,000 by three annual increments of £50.

(2) ASSISTANT ARCHITECT. — Applicants should be corporate members of the Royal Institute of British Architects and of the Town Planning Institute, and/or hold appropriate academic qualifications, with considerable ability and experience in Civic and architectural design, and preferably experienced in Planning practice. Knowledge of landscape architecture would be an additional or alternative qualification to the latter. The commencing salary is £850 per annum, rising to £1,000 by three annual increments of £50.

(3) CHIEF PLANNING ASSISTANT.—Applicants should be corporate members of the Royal Institute of British Architects, or the Chartered Surveyors' Institute, and/or Town Planning Institute, and must show that by their training and experience they would be capable of supervising the staff and work of the Department's drafting office. The salary is £500 per annum, rising by annual increments of £25 to £600.

(4) PLANNING ASSISTANTS.—

(a) Grade D: Applicants are expected to hold professional qualifications in Planning and/or in allied professional practice, or have considerable experience in Planning practice. The salary is £450, rising by annual increments of £20 to £510.

(b) Grade C: Applicants should have a knowledge of the technique of Planning, and be experienced in this or allied professional practice. The salary is £390, rising by annual increments of £15 to £435.

The appointments will in every case be subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicants will be required to pass a medical examination. All salaries are supplemented by a War Bonus at the present time. All appointments will be terminable by one month's notice on either side. Applications, stating age, qualifications, experience, and position with regard to military service, together with the names of three responsible persons to whom reference may be made, must be delivered to the undersigned, clearly marked "City Planning Appointment," not later than the 30th October, 1944. Canvassing will be a disqualification.

FREDERICK SPARKS,
Town Clerk.

The Municipal Office,
Royal Beach Hotel, Southsea.
6th October 1944. 823

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EDUCATION COMMITTEE.

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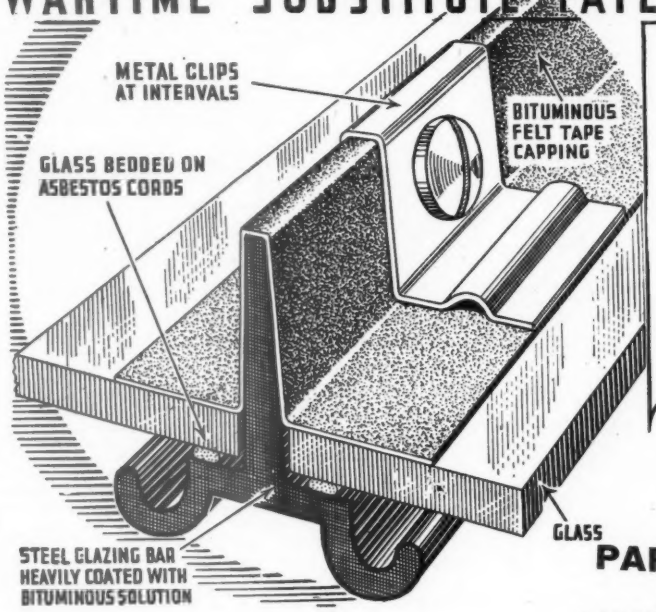

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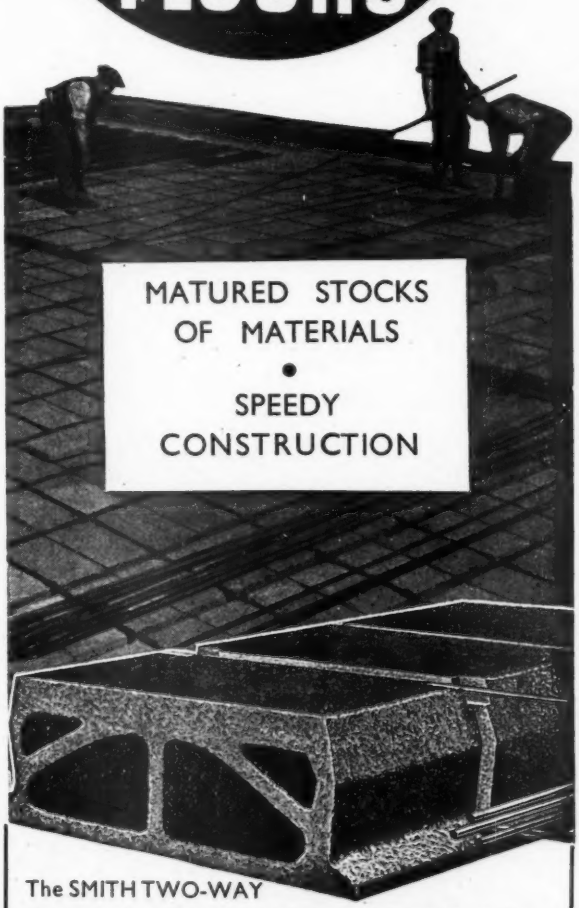

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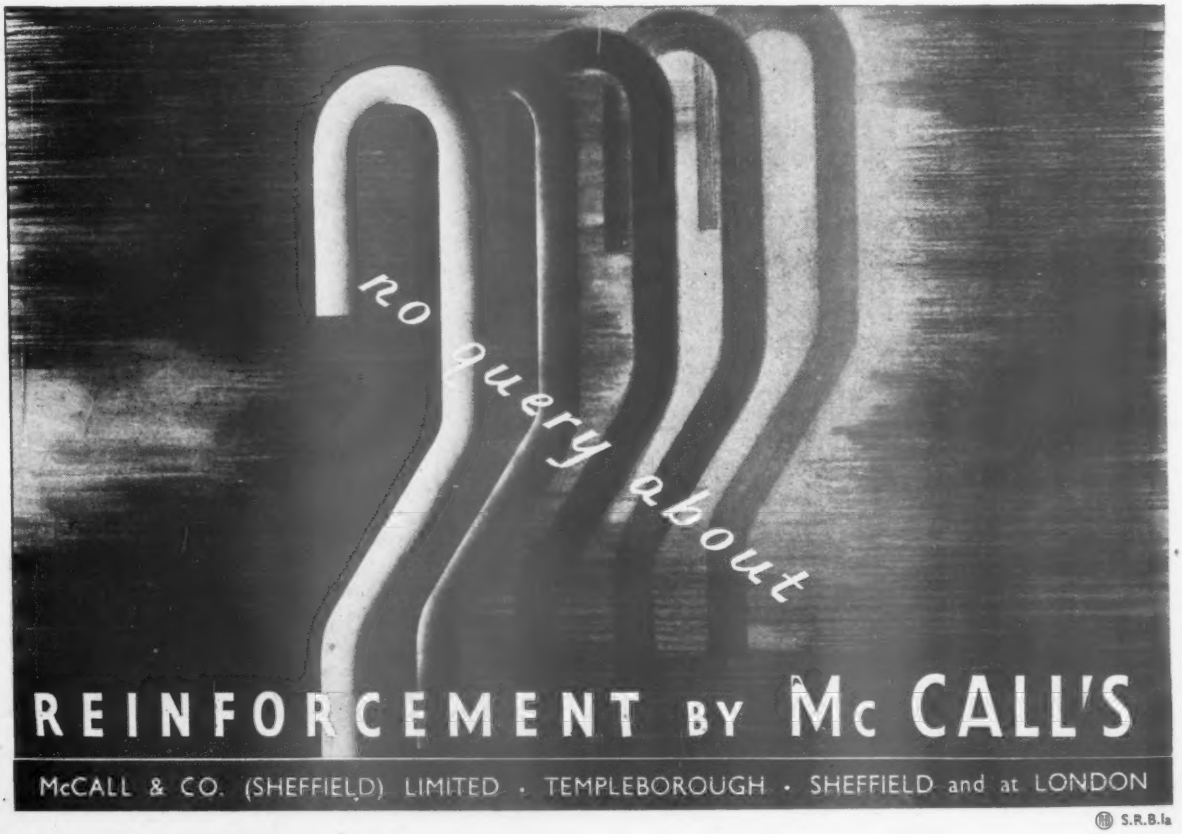

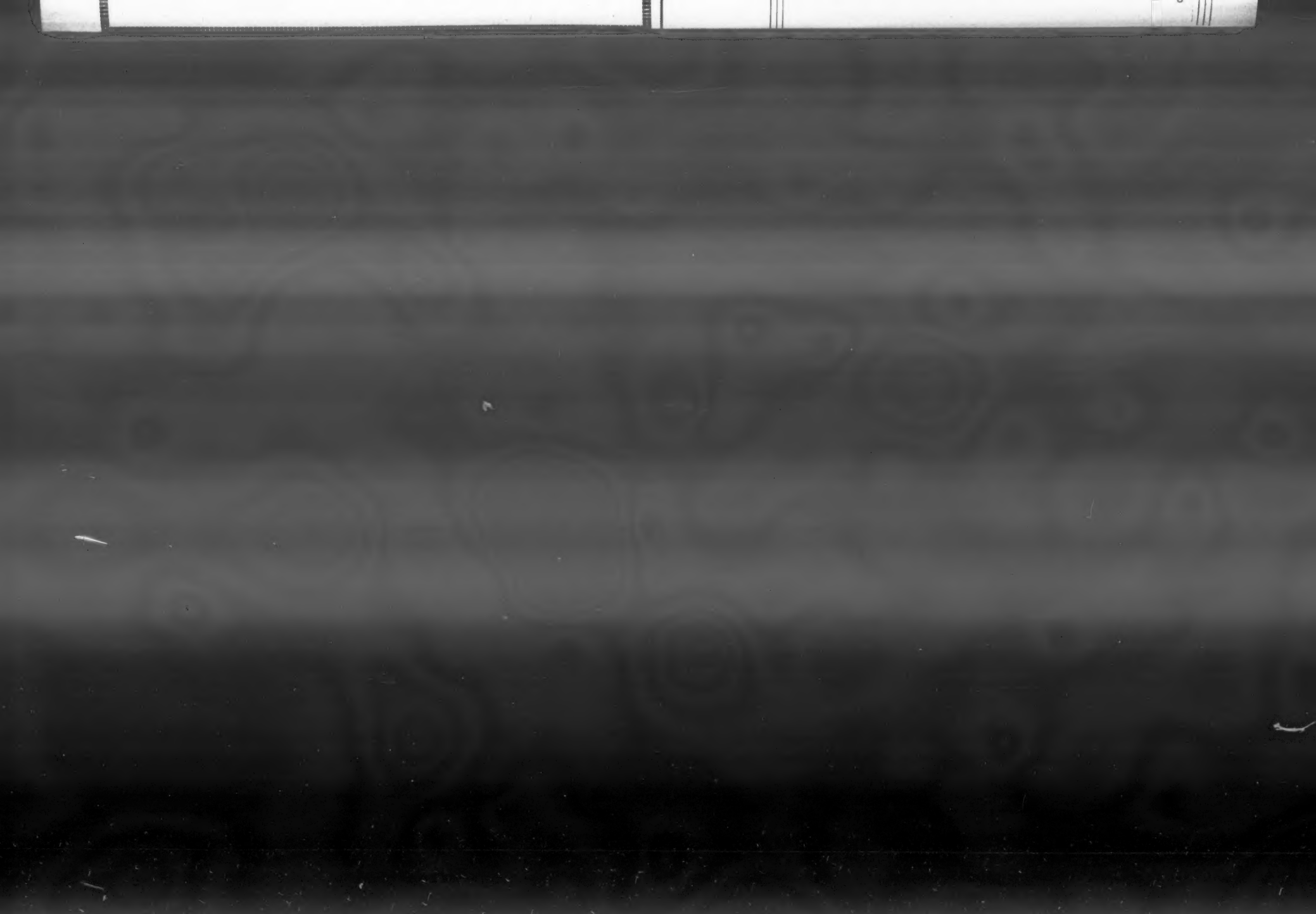

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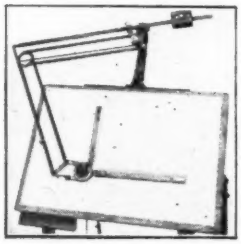

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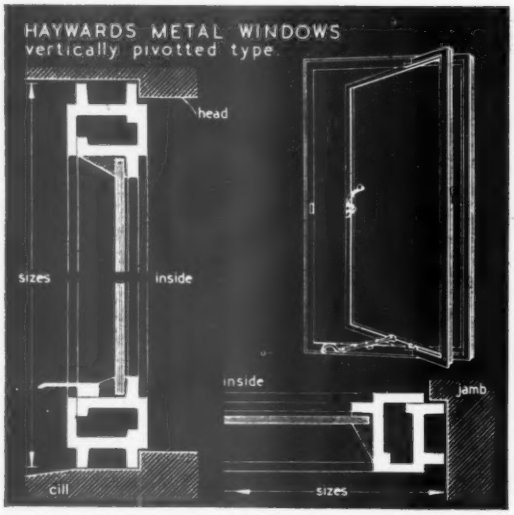

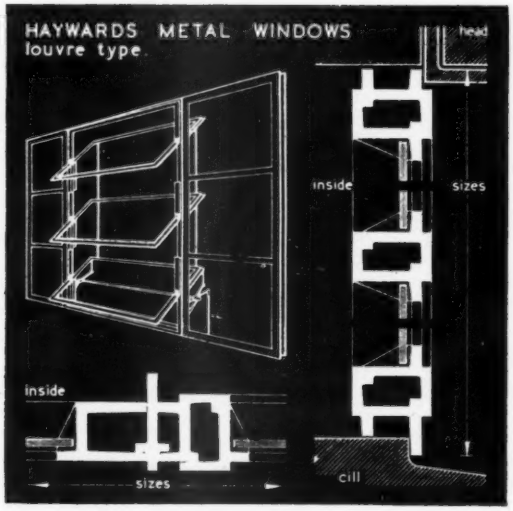

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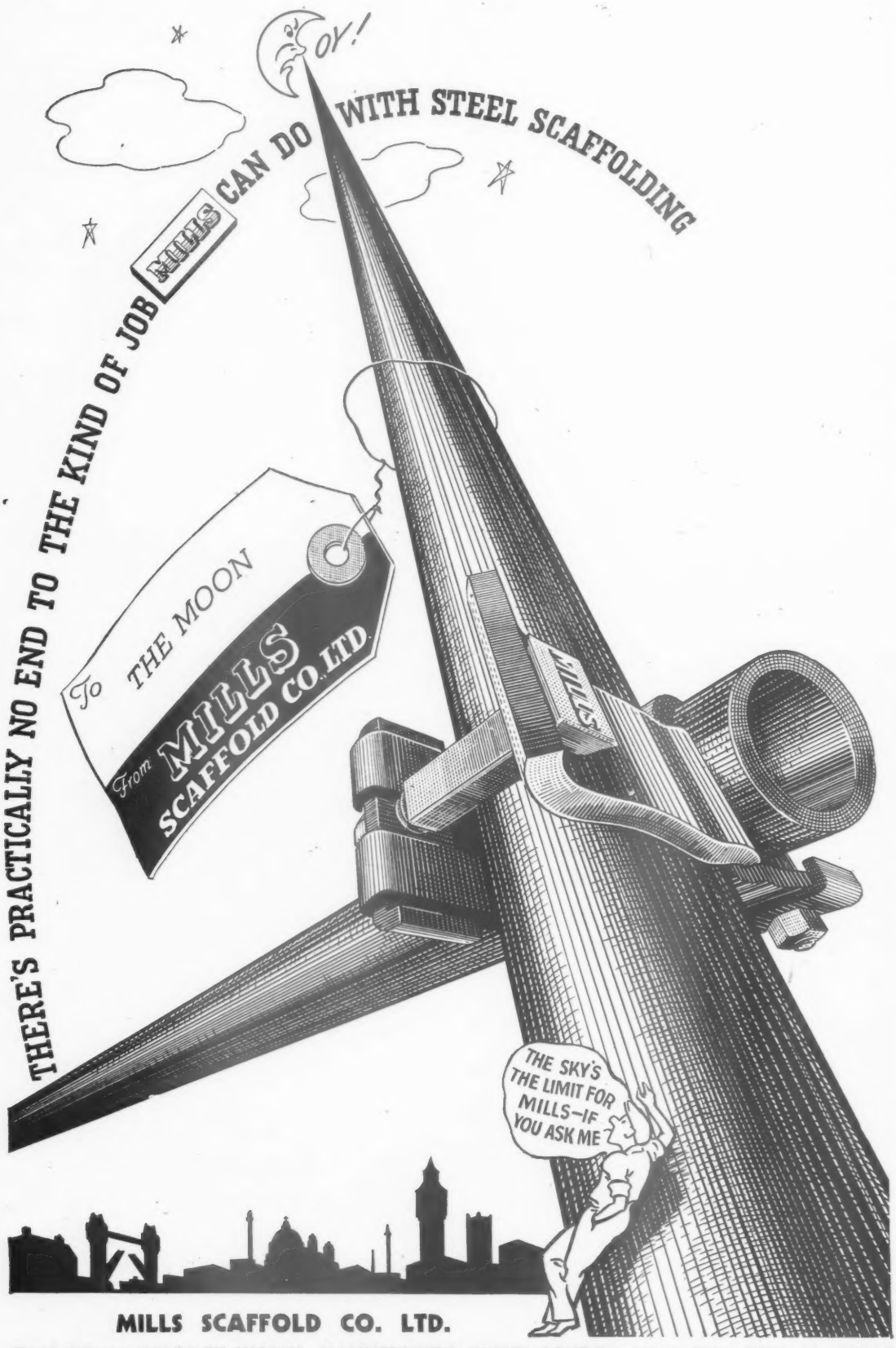

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